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# ASSESSING SUSTAINABILITY IN AN EMERGENCY RESPONSE CONTEXT

JULY 2015

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| CHP | Community Hand Pump |
| DDR | Disaster Risk Reduction |
| HEW | Health Education Worker |
| HWP | Hand washing and hygiene promotion |
| IRC | International Rescue Committee (USA) |
| MWS | Mechanized water system |
| NGO | Non-governmental organization |
| OFDA | Office of Foreign Disaster Assistance (USAID) |
| RWH | Rainwater harvesting |
| SIT | Sustainability Index Tool |
| SNNPR | Southern Nations, Nationalities, and Peoples' Region |
| UNHCR | United Nations High Council for Refugees |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| WASH | Water, Sanitation, and Hygiene |
| YHYH | Your Health is in Your Hands (USAID Project) |

# 1.0 INTRODUCTION

As part of USAID's Quick Response Technical Assistance Task Order under the Integrated Water and Coastal Resources Management IQC II (Water II IQC) a number of assessments were conducted to understand the status and trends in the water, sanitation and hygiene (WASH) sector in priority countries. USAID's WASH Sustainability Index Tool (SIT) was applied to projects in Ethiopia and Liberia. In Ethiopia, it was also decided to adapt the SIT to a portfolio of emergency response interventions implemented with funding from the Office of Foreign Disaster Assistance (OFDA) and apply this as a pilot to better understand the drivers and barriers to sustainability within the context of an emergency response program.

Due to various timing and capacity challenges, the pilot assessment did not take place. This report therefore addresses only the adaptation of the SIT tool for an emergency context either in Ethiopia or elsewhere. The report describes the theory behind the adaptation of the SIT and presents the factors which influence the sustainability of emergency response interventions. It also presents generic frameworks for four emergency WASH interventions.

The remaining sections of the document provide a brief background on the challenges which are common in emergency response programs, such as the OFDA/Ethiopia rapid response programme (Section 2), background on the SIT (Section 3), rationale for the adaptation of the SIT to an emergency context (Section 4), description of the new disaster risk reduction factor and the options for analysis under the new Emergency Sustainability Index Tool (Emergency SIT) (Section 5). The four frameworks which were developed are provided in Annex 1.

## 1.1 CHALLENGES FACED IN EMERGENCY RESPONSE

Through its implementing partners under the Rapid Response Program, OFDA provides assistance to people affected by natural and humanitarian disasters so that they can meet the critical needs of affected populations. In 2012, OFDA in Ethiopia awarded the International Rescue Committee (IRC) US$4 million to increase access to safe water and sanitation facilities, promote hygienic practices, provide disaster and conflict-affected communities with basic relief materials, and support protection activities in disaster contexts. These interventions were meant to reduce the vulnerability of at-risk populations by emphasizing and integrating protection into all project interventions and by strengthening local government and relief organizations' capacity to sustainably manage WASH programs in the long-term. Following the initial contract period, IRC was awarded contract extensions in 2013, 2014, and 2015.

Within the rapid response portfolio, USAID implementing partners undertake both hardware and software interventions. In Ethiopia the hardware interventions included: the construction and rehabilitation of community level (i.e., *birkads*/ponds) and roof-top rainwater harvesting systems, rehabilitation and maintenance of deep and shallow water supply systems, and hand pump water supply systems. Software interventions included: training of health extension workers (HEW), water committees, *woreda* water office staff and technicians, and the execution of emergency hygiene promotion at the community level.

Through conversations with USAID it was determined that the adaptation of the SIT would focus on four interventions which are very common emergency WASH interventions and which were part of OFDA/Ethiopia's rapid response program. These four interventions are presented in Table 1. SIT assessment frameworks existed for these four intervention types.

**TABLE 1: FRAMEWORKS DEVELOPED FOR THE EMERGENCY SIT PILOT ASSESSMENT IN ETHIOPIA**

| Abbreviation | Description of Intervention |
|---|---|
| **CHP** | **Community Hand Pumps**<br>Construction of hand-dug wells and shallow boreholes<br>Rehabilitation of hand-dug wells and shallow and deep boreholes |
| **MWS** | **Mechanized Water Systems**<br>Pipe connection and construction of storage from deep well source<br>Rehabilitation of pipeline for river water source water supply |
| **RWH** | **Rainwater Harvesting**<br>Construction and rehabilitation of roof-top rain water harvesting |
| **HWP** | **Hygiene and hand washing promotion** |

## 1.2 WASH SUSTAINABILITY INDEX TOOL (SIT)

The WASH Sustainability Index Tool (SIT) was developed in 2012 under The Rotary International-USAID partnership (International H2O Alliance) and applied initially in three countries. It has subsequently been refined, made available online and been applied in at least five additional countries. More information on the WASH SIT can be found at the USAID website:
http://www.washplus.org/rotary-usaid

The SIT is an analysis framework developed by USAID in 2012 to assess the likelihood that water and sanitation services and the adoption of healthy hygiene behaviors are sustained in communities having benefited from multi-year assistance projects. The tool utilizes numerous indicators to feed into a composite scoring system to evaluate the relative influence of several factors associated with long-term sustainability of WASH services in five categories: Institutional, Management, Financial, Environmental and Technical. The SIT is applied at three administrative levels of analysis: service provision, decentralized, and national, and can be used to assess the risk factors to and drivers of sustainability for 17 distinctive household and community WASH intervention types

Therefore, the SIT it takes into account wider conditions some of which will be outside of the domain of the program itself, such as policies and strategies or other conditions related to the enabling environment. The SIT assumes stable conditions (i.e., no emergency) and, to date has been primarily applied in rural situations, with a few applications in urban and peri-urban areas. It has not been used to consider likely sustainability of post emergency interventions.

Following discussions with USAID, it was determined that the tool would be adapted so it can be used in looking at recovery and if/how this contributes to sustainability. The following sections present the rationale for adaptation of the WASH SIT for application to Emergency Response Interventions.

# 2.0 ADAPTATION TO EMERGENCY CONTEXT

## 2.1 DEVELOPMENTAL AND EMERGENCY WASH PROGRAMMING

In general the aims of emergency response and development WASH interventions are quite different. The overarching aim of emergency response WASH interventions are: *reducing and then maintaining morbidity and mortality within acceptable levels, and ensuring protection concerns are addressed.* The overarching aim of development WASH could be characterized as: *providing sustainable access to safe WASH services at acceptable levels of service indefinitely.*

These differences result in a hierarchy of aims that shift over time, with an underlying assumption that following a period of emergency, stability and normalization will occur through a transition phase over time, often referred to as "recovery". The focus directly after disasters and other emergency situations is on immediate public health concerns which will then shift to long term public health and links to broader development processes during the recovery phase. Obviously the length and nature of this transition period will depend on the type of disaster event (e.g. acute, chronic, rapid onset, etc.) and the ability of the country to respond and react. Therefore in the recovery phase it is considered good practice for agencies to include a strategic objective to consider and if possible address developmental or more sustainable aspects of WASH service provision, such as capacity building a community level, or linkages with local government (and possibly even building capacity at this level), within project or donor constraints for funding and intervention timeframes.

Figure 1 presents a time depiction of a disaster event with the different phases along the x-axis and the level of external support typically required along the y-axis. This figure illustrates the changes over time in the different phases: Development, pre disaster (which may or may not have included a resilience component); Relief; Recovery; and Development, post disaster (possible retrospective inclusion of a resilience component). It is also worth examining the different characteristics of relief and development (Table 2) as this highlights which of the many characteristics of relief are fundamentally not supportive of sustainability.

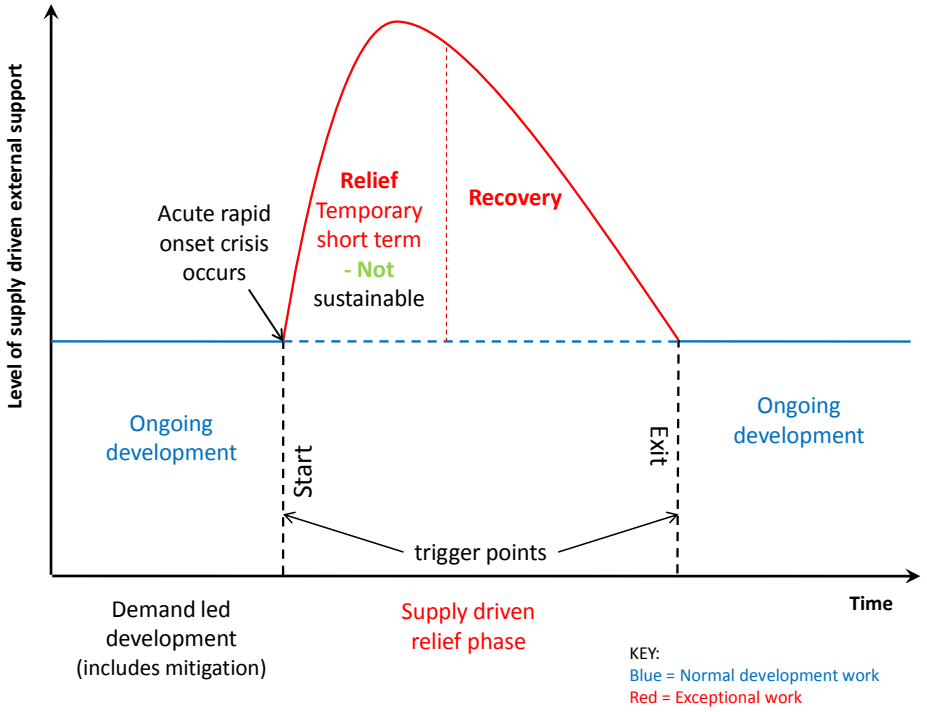


**FIGURE 1: GRAPHICAL REPRESENTATION OF THE PHASES OF DEVELOPMENT AND EMERGENCY**

As shown by Figure 1, there is a strong dichotomy between the levels of external support during relief as compared with development. The UK's Disaster Emergency Committee has noted the inherent tension between short-term, life-saving situations and the longer-term interventions and the need to identify exit strategies or ways of transitioning to development interventions. The list in Table 2 highlights in particular that considerably more external input is typical of relief interventions and that relief is fundamentally a temporary and non-sustainable intervention and so defined as such.

**TABLE 2: GENERAL CHARACTERISTICS OF RELIEF AND DEVELOPMENT**

| RELIEF | DEVELOPMENT |
|---|---|
| Higher external support | Lower levels of support |
| Full subsidy | Shared contribution |
| Implementor (government and donor) driven | Community driven |
| Reactive planning | Participatory planning |
| Rapid pace | Measured progress |
| Life saving | Well-being and livelihood |

**TABLE 3: DESCRIPTION OF THE PHASES OF EMERGENCY AND DEVELOPMENT**

| PHASE | DESCRIPTION |
|---|---|
| RELIEF | Water trucking, bulk pressured surface water treatment systems, faecal sludge trucking should all be put in this category. i.e., are pure relief measures, normally undertaken with an outlook of limited duration followed by a transition to something more sustainable. However urban communities often use water trucking for their regular supply via hand/donkey carts, while faecal sludge trucking has been underway for years in some refugee camps. It is difficult to know whether free services that are normally paid for in part/whole by the community, should be classified as relief, e.g., delivery of free bars of soap, rather than household purchase. However, the point is that we should by definition and good practice not seek sustainability within relief interventions, but rather terminate these when they can be replaced by something else. Although an over simplification we should presume that relief will have no bearing on sustainability though it may have a temporary effect on some conditions in the SIT. Thus relief needs should be categorized and noted, but not considered as in the same way – or to the same standards with regard to sustainability as 'normal' interventions. |
| RECOVERY | If we define recovery as providing services in a way that can be transitioned back to development, then clearly some (or all) aspects of sustainability need to be considered as part of recovery programming. There is often a choice between relief and recovery at the acute phase of a disaster e.g., choosing well rehabilitation over water trucking (relief). This is where intervention aims come in, water trucking may well be more predictable in the short-term in reducing morbidity and mortality, while rehabilitation has greater potential for sustainability. While recovery can contribute to/build upon conditions for sustainability, the extent to which it can, will be dictated by programmatic conditions imposed by donors or governments. Specifically 6-12 month project time frames and limits on budget and spending inhibit recovery interventions from more completely delivering a sustainability objective[1]. We may expect that sustainability conditions closer to service availability and of shorter time duration could be built upon in recovery programs and these can be identified and highlighted in the sustainability assessment (SIT application). |
| RESILIENCE | Resilience, i.e., the ability of a system to cope with shocks, is part of the development agenda, though we might not expect to find resilience efforts in older projects. It is also the case that resilience will be more actively considered at all levels where a location has experienced a shock, as opposed to locations that are likely, but have not yet experienced recent shocks. In the case where conditions are stable and shock free, an existing development project may be sustainable, but external shocks may result in the need for relief and then recovery interventions. One would expect most interventions to include resilience. However the SIT needs to be adapted to identify elements of risk reduction and mitigation within different types of interventions. |

## 2.2 RATIONALE FOR ADAPTATION OF THE WASH SIT

As part of the adaptation of the WASH SIT a range of international humanitarian WASH experts in several lead organisations operating globally, including UNHCR, UNICEF, Oxfam UK, and *Action Contre la Faim*, were consulted. These experts provided feedback on the overall rationale for adaptation of the SIT as well as specific inputs and feedback into the frameworks for the interventions which were to be considered in the planned pilot assessment.

[1] WASH preparedness and response in Urban and Peri Urban areas. (Luff, 2014)

The WASH SIT addresses the key question: "*What is the likelihood that the outcome of an intervention will be sustainable?*" This is regardless of whether the intervention is described as development, development with resilience, or recovery. The adaptation of the WASH SIT for a humanitarian or emergency context should be informed by its objective, namely the permanency of services from the perspective of communities, governments and donors (i.e., has sustainable and durable benefits). The debate in the emergency and development sector has considered the extent to which emergency response work can contribute to development under various paradigms or labels (e.g., disaster risk reduction, resilience). An important question which should be answered is: "To what extent can emergency or humanitarian work contribute towards sustainable services particularly where there are stated longer term "developmental" type objectives in recovery programs?" This can be achieved where well-planned recovery interventions reinforce existing development strategies and make linkages with permanent institutions and systems (as oppose to undermining or by-passing these by working in isolation).

Considering this in the context of adapting the WASH SIT to look at recovery interventions an additional question can be framed which is: "*How much do recovery interventions contribute to building sustainability?"* This question can be answered by identifying the indicators where we would expect to see recovery interventions having an effect and focus on these by distinguishing between:

- Conditions that should be in place but are outside direct control of service provider/project implementers; and
- Conditions which the service provider/project implementers can have some influence over in their work, i.e., would be considered as achievable best practice within typical recovery program constraints.

This would isolate and highlight the ability of recovery phase interventions to contribute towards sustainability and in so doing help understand if enough was being undertaken, within what are often restrictive timelines and budgets, to address this desired outcome. Based upon this rationale for adaptation, a list of specific modifications was developed and is summarized in Table 4. Note that these have not been field tested.

**TABLE 4: PROPOSED ADAPTATIONS TO THE WASH SIT TO MAKE IT APPLICABLE TO INTERVENTIONS UNDERTAKEN AS A RESULT OF AN EMERGENCY**

| Requirement based on the Rationale | SIT adaptation |
|---|---|
| 1) Be able to distinguish between relief, recovery and development interventions. | • Each specific intervention (i.e., entry) in the intervention inventory which is developed at the outset of the SIT assessment will have to be categorized into: relief, recovery, or development (if applicable). The implementing organization (e.g., IRC in the case of Ethiopia) would need to participate in the process of classification of interventions based upon on guidance and/or definitions such as those presented in Table 1. |
| 2) Identify the primary indicators where we would expect to see recovery interventions having an effect. These will be determined by asking the question of each primary indicator;<br>a) Will an emergency affect the situation i.e. worsen the conditions related to the indicator even if only on a short term basis AND b) could a recovery intervention improve the situation on an on-going basis? | • Addition of an extra column/filter to the framework so that recovery affects can be highlighted and isolated in the analysis.<br>• Adding open ended qualitative questions in the survey as a catch all to ask if there are any effects on other conditions that may not have been included where it is assumed they are "out of reach" for recovery programs. |
| 3) Add an additional factor focussing on Disaster Risk Reduction (DRR); review and adapt existing indicators and sub indicators | • New DRR factor area and indicators, sub indicators and questions |
| 4) Be able to determine the extent to which disaster risk reduction measures are in place. | • Development of a new factor for disaster risk reduction and include indicators which consider the conditions at the national and decentralized level as well as the measures which may be in place in the communities. It is expected that in many cases the resiliency within the communities will be very minimal; however these indicators may help expose the specific weaknesses for future planning. |

**Qualitative questions**

It is fully recognised that humanitarian actors are often aware of many issues relating to sustainability of services, but at the same time are by definition working under (very) different and less than ideal conditions than 'regular' development practitioners. As such the adapted SIT includes a proposed set of standalone qualitative questions which reference the overall context and constraints, such as relief interventions, temporary migration and social tensions. These proposed questions are targeted to the implementing agency and/or members of district (*woreda*) government and include the following:

a) Was the recovery intervention part of an earlier purely relief-based action/and or were other development actors active in the community in the preceding 2 years?

b) Were interventions carried out in any settlements where the life/duration (of such settlements) was uncertain or temporary?

c) Can you identify any project constraints that prevented greater attention being given to enhancing sustainability measures for the recovery interventions?

d) Can you describe the impact of such constraints and specifically what sustainability conditions could not be addressed as part of the intervention?

e) Where recovery interventions were being undertaken, to what extent were measures put in place to move from short-term unsustainable relief to longer term development?

f) If there were any critical sustainability conditions that have not been addressed sufficiently that might undermine long-term viability of WASH service availability, please describe these.

g) To what extent was social cohesion disrupted by tensions and conflict arising from the disaster?

h) Can you describe how this has compromised sustainability (e.g., competing interests that cannot be resolved, difficult for community groups to come together and form WASH committees, damage to facilities, non-payment of revenues etc.)

It is intended that the responses to these questions are analysed and used in the 'sense-making' of the quantitative data responses and the associated scores to understand and explain the likely sustainability of interventions with reference to these broader conditions.

## 2.3 NEW DISASTER RISK REDUCTION FACTOR

The following section briefly presents the elements of the Emergency SIT which diverge from the WASH SIT. The proposed Emergency SIT would follow the same methodology of analysis as the WASH SIT whereby responses for each sub-indicator question are aggregated for a final indicator score. The indicator scores are aggregated for a factor score and then used, along with qualitative evidence from interviews and observations, to provide insights into the likely sustainability of interventions. The indicators of the Emergency SIT are classified (e.g., yes or no) to identify those elements of sustainability (i.e., indicators) which are within the sphere of influence of the interventions undertaken during an emergency relief phase.

A sixth factor area was created for application of the SIT in emergency contexts to reflect the importance of disaster risk reduction elements for ensuring that the interventions have the maximum potential for sustainability. This recognises that the beneficiary populations in those communities are subject to additional pressures and environmental risks which require additional consideration in order for services to be sustainable. This rationale and the resulting changes to the frameworks reflect the thinking of various Ethiopian and international WASH and emergency WASH experts. As noted earlier, the actual field testing and application of the SIT did not occur and so these adaptations – and their utility – remain untested. It is therefore likely that any pilot assessment would result in further changes to these modified frameworks (i.e. Emergency SIT) and the assumptions which underpin the adaptations. The indicator frameworks for this factor area per intervention are presented in Table 5 below and in more detail in Annexes 1 to 4.

**TABLE 5: THE GENERAL SET OF INDICATORS WHICH ARE CONTAINED IN THE DISASTER RISK RESPONSE FACTOR**

| Level | Indicator |
|---|---|
| N1 | National policy and guidelines accounts for emergency and/or recovery WASH standards and protocols related to the intervention are in place |
| N2 | Disaster/emergency coordination group and/or management protocols in place and are executed |

| | |
|---|---|
| W1 | Additional resources/financing made available to local government during an emergency/recovery period |
| W2 | Interventions are designed and managed to mitigate against the additional stress on livelihoods resulting from meteorological hazards |
| S1 | Citing and design of WASH systems and major components accounts for likely/known natural hazards and incorporates risk mitigation measures |
| S2 | Fund established by community to cope with/repair water supply system following a disaster |

## 2.4 EARLY LESSONS ON THE MODIFICATION OF THE SIT FOR EMERGENCY CONTEXTS

Although no piloting of the frameworks and survey tools occurred, some insights were gathered during the process of adaptation and consolidation from the 'standard' or developmental WASH SIT to one that could be applied in an emergency context and the differences between them. Primarily, this difference is conditioned by the emergency context and the need to take into account the pressures of the emergency situation, whilst recognising that wider issues regarding sustainability of the interventions are similar.

The trigger for involvement in the emergency situation will be different and will involve different implementing actors (at least in the relief phase). However, the outcomes that the SIT measures in an emergency context as opposed to a development context are aligned by virtue of intervention similarity (in terms of hardware). This is understandable, as in the specific case of Ethiopia, there are many areas of the country (including the proposed assessment areas) where emergency conditions are chronic in nature and may be considered almost as 'normal', particularly in regions suffering from repeated climate-related stresses (e.g., frequent drought or flooding).

We believe that as with the development SIT, the emergency SIT should also assess higher-level capacities in the enabling environment. Even in areas where emergency response interventions are being funded largely by external donors, the permanent government entities and other civil society organizations and institutions may also be present, albeit with weaker capacities. With respect to assessing the response of government agencies more generally, the state is always an actor in humanitarian interventions (outside acute 'failed state' scenarios) so we would emphasise that the SIT approach (involving local/district/ and National Government informants) is highly applicable in humanitarian and emergency situations.

However, even taking the above into account, we recognise that for emergency interventions the *approach to implementation* is potentially more significant than in a 'development' context in terms of the possibility to undermine or strengthen long-term sustainability of existing services. For example, in certain emergency situations, significant subsidies might be justified if livelihoods were lost even though this could impact the longer term willingness to pay for services. Here the tension between the humanitarian priority to save lives at all costs confronts the longer term issues regarding sustainability.

With respect to choices made by implementors, while the SIT can measure programme outcomes these will not necessarily relate to the implementation approach per se, although they will be a strong gauge of general effectiveness and the longer term impact on sustainability. As with other iterations of the SIT, we are keen to stress that it is not a tool designed explicitly for programme evaluation. As the majority of the informants

for the SIT are either government actors or community members or their representatives, the Emergency SIT provides a perspective on outcomes which is outside of, but complimentary to the emergency response framework.

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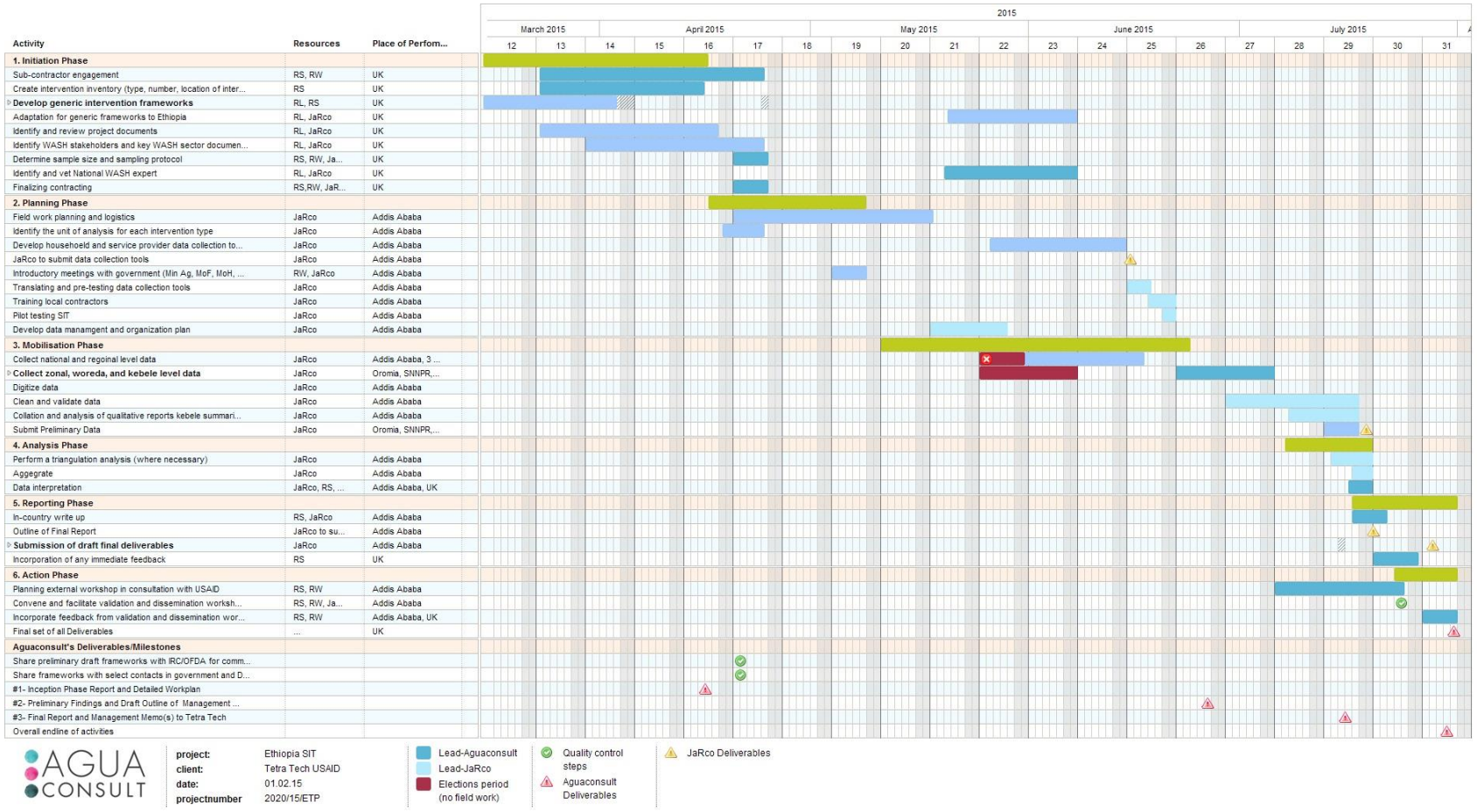
# ANNEXES

## A.1 EXAMPLE WORKPLAN



# A.2 EXAMPLE WORKPLAN DETAIL

| row number | Activity | Place of Perfo | start row | end row |
|---|---|---|---|---|
| 1 | 1. Initiation Phase | | 15/03/2015 | 16/04/2015 |
| 1.1 | Sub-contractor engagement | UK | 23/03/2015 | 24/04/2015 |
| 1.2 | Create intervention inventory (type, number, location of interventions) | UK | 23/03/2015 | 15/04/2015 |
| 1.3 | Develop generic intervention frameworks | UK | 15/03/2015 | 03/04/2015 |
| 1.3.1 | Identify humanitarian response resources | UK | 19/03/2015 | 25/03/2015 |
| 1.3.2 | Compare these indicators with existing frameworks for CHP, CRS, HWP, and RWH | UK | 23/03/2015 | 05/04/2015 |
| 1.3.3 | Arrange humanitarian indicators into a SIT architecture | UK | 30/03/2015 | 03/04/2015 |
| 1.3.4 | Circulate frameworks to humanitarian experts for reflection | UK | 03/04/2015 | 03/04/2015 |
| 1.3.5 | Submit final Frameworks to Aguaconsult | UK | 24/04/2015 | 24/04/2015 |
| 1.4 | Adaptation for generic frameworks to Ethiopia | UK | 20/05/2015 | 07/06/2015 |
| 1.5 | Identify and review project documents | UK | 23/03/2015 | 17/04/2015 |
| 1.6 | norms, regulatory docs, etc) | UK | 30/03/2015 | 24/04/2015 |
| 1.7 | Determine sample size and sampling protocol | UK | 20/04/2015 | 24/04/2015 |
| 1.8 | Identify and vet National WASH expert | UK | 20/05/2015 | 07/06/2015 |
| 1.9 | Finalizing contracting | UK | 20/04/2015 | 24/04/2015 |
| 2 | 2. Planning Phase | | 16/04/2015 | 08/05/2015 |
| 2.1 | Field work planning and logistics | Addis Ababa | 20/04/2015 | 18/05/2015 |
| 2.2 | Identify the unit of analysis for each intervention type | Addis Ababa | 18/04/2015 | 24/04/2015 |
| 2.3 | Develop household and service provider data collection tools | Addis Ababa | 26/05/2015 | 14/06/2015 |
| 2.4 | JaRco to submit data collection tools | Addis Ababa | 15/06/2015 | 15/06/2015 |
| 2.5 | Introductory meetings with government (Min Ag, MoF, MoH, MoEd) | Addis Ababa | 04/05/2015 | 08/05/2015 |
| 2.6 | Translating and pre-testing data collection tools | Addis Ababa | 15/06/2015 | 18/06/2015 |
| 2.7 | Training local contractors | Addis Ababa | 18/06/2015 | 21/06/2015 |
| 2.8 | Pilot testing SIT | Addis Ababa | 20/06/2015 | 21/06/2015 |
| 2.9 | Develop data manamgent and organization plan | Addis Ababa | 18/05/2015 | 28/05/2015 |
| 3 | 3. Mobilisation Phase | | 11/05/2015 | 23/06/2015 |
| 3.1 | Collect national and regoinal level data | Addis Ababa, 3 | 25/05/2015 | 17/06/2015 |
| 3.2 | Collect zonal, woreda, and kebele level data | Oromia, SNNPF | 25/05/2015 | 05/07/2015 |
| 3.2.1 | JaRco to submit progress reports | Oromia, SNNPF | 24/06/2015 | 01/07/2015 |
| 3.2.2 | Collate qualitative reports and kebele summaries | Oromia, SNNPF | 22/06/2015 | 05/07/2015 |
| 3.2.3 | Review and provide feedback on qualitative reports and progress reports | UK | 25/06/2015 | 05/07/2015 |
| 3.3 | Digitize data | Addis Ababa | | |
| 3.4 | Clean and validate data | Addis Ababa | 29/06/2015 | 17/07/2015 |
| 3.5 | Collation and analysis of qualitative reports kebele summaries | Addis Ababa | 08/07/2015 | 17/07/2015 |
| 3.6 | Submit Preliminary Data | Oromia, SNNPF | 13/07/2015 | 18/07/2015 |
| 4 | 4. Analysis Phase | | 07/07/2015 | 19/07/2015 |
| 4.1 | Perform a triangulation analysis (where necessary) | Addis Ababa | 14/07/2015 | 19/07/2015 |
| 4.2 | Aggegrate | Addis Ababa | 17/07/2015 | 19/07/2015 |
| 4.3 | Data interpretation | Addis Ababa, U | 16/07/2015 | 19/07/2015 |
| 5 | 5. Reporting Phase | | 17/07/2015 | 31/07/2015 |
| 5.1 | In-country write up | Addis Ababa | 17/07/2015 | 21/07/2015 |
| 5.2 | Outline of Final Report | Addis Ababa | 19/07/2015 | 19/07/2015 |
| 5.3 | Submission of draft final deliverables | Addis Ababa | 28/07/2015 | 28/07/2015 |
| 5.3.1 | Aguaconsult submit draft of deliverables to Tetra Tech | UK | 15/07/2015 | 15/07/2015 |
| 5.4 | Incorporation of any immediate feedback | UK | 20/07/2015 | 26/07/2015 |
| 6 | 6. Action Phase | | 23/07/2015 | 31/07/2015 |
| 6.1 | Planning external workshop in consultation with USAID | Addis Ababa | 06/07/2015 | 24/07/2015 |
| 6.2 | Convene and facilitate validation and dissemination workshop | Addis Ababa | 23/07/2015 | 23/07/2015 |
| 6.3 | Incorporate feedback from validation and dissemination workshop | Addis Ababa, U | 27/07/2015 | 31/07/2015 |
| 6.4 | Final set of all Deliverables | UK | 31/07/2015 | 31/07/2015 |
| 7 | Aguaconsult's Deliverables/Milestones | | | |
| 7.1 | Share preliminary draft frameworks with IRC/OFDA for comment/feedback | | 20/04/2015 | 20/04/2015 |
| 7.2 | Share frameworks with select contacts in government and DPs for feedback | | 20/04/2015 | 20/04/2015 |
| 7.3 | #1- Inception Phase Report and Detailed Workplan | | 15/04/2015 | 15/04/2015 |
| 7.4 | #2- Preliminary Findings and Draft Outline of Management Memos | | 26/06/2015 | 26/06/2015 |
| 7.5 | #3- Final Report and Management Memo(s) to Tetra Tech | | 15/07/2015 | 15/07/2015 |
| 7.6 | Overall endline of activities | | 30/07/2015 | 30/07/2015 |

## B.1 COMMUNITY HANDPUMP

| WT-CHP-I-N1 | Primary Investigation Method | Triangulation | National policy, norms and guidelines for community-managed water supply and enabling legislation is in place | Answer |
|---|---|---|---|---|
| WT-CHP-I-N1a | MoWIE | BoWR | a) Does national policy for water supply recognize community management? | Yes/No |
| WT-CHP-I-N1b | MoWIE | BoWR | b) Have national norms and standards been set for the constitution and governance of community-based service providers (e.g. water committees in terms of functions)? | Yes/No |
| WT-CHP-I-N1c | MoWIE | BoWR | c) Is legislation in place that gives community management legal standing (e.g. by-laws formalizing water committees)? | Yes/No |
| WT-CHP-I-N1d | MoWIE | BoWR | d) Is there a national registry of the water systems/points that are managed by community-based organizations? | Yes/No |

| WT-CHP-I-D1 | Primary Investigation Method | Triangulation | Roles and responsibilities of district (service authority) and ownership arrangements are clearly defined | Answer |
|---|---|---|---|---|
| WT-CHP-I-D1a | WWO | KWT | a) Are there formalized roles and responsibilities for the service authority? | Yes/No |
| WT-CHP-I-D1b | WWO | KWT | b) Are the roles and responsibilities of the service authority written down and accessible? (*Verify)* | Yes/No |
| WT-CHP-I-D1c | WWO | KWT | c) Are the roles and responsibilities of the service authority understood by all in the service authority involved in overseeing the water system? | Yes/No |
| WT-CHP-I-D1d | WWO | KWT | d) Are the roles and responsibilities of the service authority understood by the service provider? | Yes/No |

| WT-CHP-I-S1 | Primary Investigation Method | Triangulation | There is a water committee which has been constituted in line with national norms and standards | Answer |
|---|---|---|---|---|
| WT-CHP-I-S1a | WASHCO | HH | a) Is there a water committee? | Yes/No |
| WT-CHP-I-S1b | WASHCO | HH | b) Are there national (or local) norms and standards for the composition of a water committee? IF YES-> Is the water committee constituted in line with the national (or local) norms and standards, in terms of number of members and the functions of each member? | Yes/No |
| WT-CHP-I-S1c | WASHCO | HH | c) Is the water committee constituted in line with the national norms and standards, in terms of gender? *In the absence of a standard, how many men?* _____ *How many women?* _____ | Yes/No |
| WT-CHP-I-S1d | WASHCO | HH | d) Has the water committee been democratically elected with involvement of the entire community? | Yes/No |

| WT-CHP-M-N1 | Primary Investigation Method | Triangulation | There is an updated national monitoring system or database available | Answer |
|---|---|---|---|---|
| WT-CHP-M-N1a | MoWIE | NWCO | a) Is there a national water system/water point database? | Yes/No |
| WT-CHP-M-N1b | MoWIE | NWCO | b) Does the collected monitoring data include information about the functionality of facilities and performance of service providers? | Yes/No |
| WT-CHP-M-N1c | MoWIE | NWCO | b) Is monitoring data collected at the district level sent to the national level on at least an annual basis? | Yes/No |
| WT-CHP-M-N1d | MoWIE | NWCO | c) Is the national water database used to influence national water planning and budgeting? | Yes/No |

| WT-CHP-M-N2 | Primary Investigation Method | Triangulation | National support to district/service authority is provided, including refresher training | Answer |
|---|---|---|---|---|
| WT-CHP-M-N2a | MoWIE | WWO | a) Is the district/service authority trained to support community water systems? | Yes/No |
| WT-CHP-M-N2b | MoWIE | WWO | b) Is routine refresher training provided to the district/service authority for their support to community water systems? | Yes/No |
| WT-CHP-M-N2c | MoWIE | WWO | c) Does this training occur at least once per year? | Yes/No |
| WT-CHP-M-N2d | MoWIE | WWO | d) Is there a system to monitor the effectiveness of the training? | Yes/No |

| WT-CHP-M-D1 | Primary Investigation Method | Triangulation | There is regular monitoring of water services and community management service provider and follow-up support | Answer |
|---|---|---|---|---|
| WT-CHP-M-D1a | WWO | KWT | a) Does the district/service authority monitor the financial, technical and administrative performance of the service provider? | Yes/No |
| WT-CHP-M-D1b | WWO | KWT | b) Does monitoring lead to direct support to the service provider when required? | Yes/No |
| WT-CHP-M-D1c | WWO | KWT | c) Does the district/service authority visit the community on monitoring visits at least 4 times per year? | Yes/No |
| WT-CHP-M-D1d | WWO | KWT | d) Does monitoring include periodic financial audits? | Yes/No |

| WT-CHP-M-S1 | Primary Investigation Method | Triangulation | Representative water committee actively manages water point with clearly defined roles and responsibilities | Answer |
|---|---|---|---|---|
| WT-CHP-M-S1a | WASHCO | HH | a) Are the management roles and responsibilities of the water committee clearly defined? ("*No" if there is no committee)* | Yes/No |
| WT-CHP-M-S1b | WASHCO | HH | b) Does the water committee carry out its technical responsibilities (e.g. ensuring system functionality)? | Yes/No |
| WT-CHP-M-S1c | WASHCO | HH | c) Does the water committee carry out its administrative duties? | Yes/No |
| WT-CHP-M-S1d | WASHCO | HH | d) Does the water committee carry out its financial management responsibilities? | Yes/No |

| WT-CHP-M-S2 | Primary Investigation Method | Triangulation | Water committee members actively participate in committee meetings and decision-making processes and reporting is transparent | Answer |
|---|---|---|---|---|
| WT-CHP-M-S2a | WASHCO | HH | a) Are water committee meetings conducted at the minimum frequency stipulated by local by-laws? [*or at least once every six months]* | Yes/No |
| WT-CHP-M-S2b | WASHCO | HH | b) Are technical records kept and shared with the community on a regular basis? *(verify)* | Yes/No |
| WT-CHP-M-S2c | WASHCO | HH | c) Are administrative records kept and shared with the community on a regular basis? *(verify)* | Yes/No |
| WT-CHP-M-S2d | WASHCO | HH | d) Are financial records kept and shared with the community on a regular basis? *(verify)* | Yes/No |

| WT-CHP-F-N1 | Primary Investigation Method | Triangulation | There are national/local mechanisms beyond community contributions and tariffs, to meet life-cycle costs, while ensuring affordability, equity, and non-discrimination | Answer |
|---|---|---|---|---|
| WT-CHP-F-N1a | MoFED | NWCO | a) Is there a line item for this in the national budget? | Yes/No |
| WT-CHP-F-N1b | MoFED | NWCO | b) Was the budget created considering total life-cycle costs including operation and minor maintenance costs, as well as making provision for capital maintenance (rehabilitation and replacement?) | Yes/No |
| WT-CHP-F-N1c | MoFED | NWCO | c) Are national/local mechanisms in place to fill the financing gap between collected revenues and life-cycle costs, where these occur? | Yes/No |
| WT-CHP-F-N1d | MoFED | NWCO | d) Are there national/local policies that ensure affordable access and equity/non-discrimination with regard to services? | Yes/No |

| WT-CHP-F-D1 | Primary Investigation Method | Triangulation | Resources available for district/service authority to fulfil functions | Answer |
|---|---|---|---|---|
| WT-CHP-F-D1a | RMoFED | WWO | a) Is there adequate staffing? | Yes/No |
| WT-CHP-F-D1b | RMoFED | WWO | b) Do the staff have adequate qualifications and skills? | Yes/No |
| WT-CHP-F-D1c | RMoFED | WWO | c) Is there sufficient budget allocated to the district water staff to provide the required support and service? | Yes/No |
| WT-CHP-F-D1d | RMoFED | WWO | d) Is the budget dispersed and used for this support / Or if support has not yet been needed is there a clear process for doing so? | Yes/No |

| WT-CHP-F-S1 | Primary Investigation Method | Triangulation | Tariff setting complies with national/local regulations, including social tariff | Answer |
|---|---|---|---|---|
| WT-CHP-F-S1a | WASHCO | HH | a) Has a water tariff been set? | Yes/No |
| WT-CHP-F-S1b | WASHCO | HH | b) Do national/local regulations prescribe that the tariff be based on projected costs, including operation and minor maintenance costs, as well as making provision for capital maintenance (rehabilitation and replacement?) | Yes/No |
| WT-CHP-F-S1c | WASHCO | HH | c) Has the tariff been set in line with national/local regulations? | Yes/No |
| WT-CHP-F-Sd | WASHCO | HH | d) Does the tariff make provision for the poorest within the community (e.g. through a social tariff)? | Yes/No |

| WT-CHP-F-S2 | Primary Investigation Method | Triangulation | Tariff collection is regular and sufficient | Answer |
|---|---|---|---|---|
| WT-CHP-F-S2a | WASHCO | HH | a) Is the tariff collected on a regular schedule (e.g. on pay-as-you-fetch basis, or monthly household levies, instead of collecting money when there is a breakdown)? | Yes/No |
| WT-CHP-F-S2b | WASHCO | HH | b) What is the annual revenue? (verify) What is the annual operating expenditure? (verify) Is the annual revenue greater than the annual expenditure? | Yes/No |
| WT-CHP-F-S2c | WASHCO | HH | c) Is there a national/local target for collection efficiency (i.e. percent who regularly pay) | Yes/No |
| WT-CHP-F-S2d | WASHCO | HH | d) Do most (at least 80%, *or a proportion in line with national or locally set standard*) households pay the tariff? (*i.e. Are they achieving the specified collection efficiency*) | Yes/No |

| WT-CHP-F-S3 | Primary Investigation Method | Triangulation | The water committee demonstrates effective financial management and accounting | Answer |
|---|---|---|---|---|
| WT-CHP-F-S3a | WASHCO | HH | a) Does the water committee keep financial records? (verify) | Yes/No |
| WT-CHP-F-S3b | WASHCO | HH | b) Does the committee have a bank account? (verify) | Yes/No |
| WT-CHP-F-S3c | WASHCO | HH | c) Does the committee share financial records with the community on a regular basis? | Yes/No |
| WT-CHP-F-S3d | WASHCO | HH | d) Are financial accounts audited? (verify) | Yes/No |

| WT-CHP-T-N1 | Primary Investigation Method | Triangulation | There are national/local norms that define acceptable service levels with explicit indicators and thresholds (e.g. water quality, quantity, accessibility, affordability, etc.) | Answer |
|---|---|---|---|---|
| WT-CHP-T-N1a | MoWIE | NWCO | a) Are there national/local norms for water quality? | Yes/No |
| WT-CHP-T-N1b | MoWIE | NWCO | b) Are there national/local norms for quantity? (e.g. the borehole is deep enough to provide water throughout the year, including during the dry season) | Yes/No |
| WT-CHP-T-N1c | MoWIE | NWCO | c) Are there national/local norms for accessibility (distance from household, crowding at water point) which also explicitly address issues of equity and non-discrimination against women, disabled, children, and elderly? | Yes/No |
| WT-CHP-T-N1d | MoWIE | NWCO | d) Are there national/local norms for affordability? | Yes/No |

| WT-CHP-T-N2 | Primary Investigation Method | Triangulation | There are national/local norms that define equipment standardization and arrangements for providing spare parts | Answer |
|---|---|---|---|---|
| WT-CHP-T-N2a | MoWIE | NWCO | a) Do national/local norms define equipment standardization and arrangements for providing spare parts? | Yes/No |
| WT-CHP-T-N2b | MoWIE | NWCO | b) Do national guidelines exist with regard to the construction of water points (borehole apron or platform, drainage, fencing, etc.)? | Yes/No |
| WT-CHP-T-N2c | MoWIE | NWCO | c) Are these guidelines available and widely disseminated? | Yes/No |
| WT-CHP-T-N2d | MoWIE | NWCO | d) Are the roles and responsibilities with regard to monitoring and enforcement clear? | Yes/No |

| WT-CHP-T-D1 | Primary Investigation Method | Triangulation | The district water staff are able to provide support for maintenance and repairs on request | Answer |
|---|---|---|---|---|
| WT-CHP-T-D1a | KWT | WASHCO | a) Are the Kebele water staff able to provide technical support for maintenance on request? | No/Sometimes/Always |
| WT-CHP-T-D1b | KWT | WASHCO | b) Are the Kebele water staff able to provide technical support for repairs on request? | No/Sometimes/Always |

| WT-CHP-T-S1 | Primary Investigation Method | Triangulation | Hand pump is functional and provides basic level of service according to national policy | Answer |
|---|---|---|---|---|
| WT-CHP-T-S1a | WASHCO | HH | a) Does the hand pump meet the criteria for water quality? | Yes/No |
| WT-CHP-T-S1b | WASHCO | HH | b) Does the hand pump meet the criteria for quantity? | Yes/No |
| WT-CHP-T-S1c | WASHCO | HH | c) Does the hand pump meet the criteria in terms of accessibility (distance from household, crowding at water point) ease of use for women, disabled, children, and elderly)? | Yes/No |
| WT-CHP-T-S1d | WASHCO | HH | d) Is the hand pump designed, constructed, and maintained so as to ensure ease of use by potentially marginalized populations (poor, elderly, women, children, disabled, etc.)? | Yes/No |

| WT-CHP-T-S2 | Primary Investigation Method | Triangulation | Hand pump complies with standards and norms in terms of siting and public health risk | Answer |
|---|---|---|---|---|
| WT-CHP-T-S2a | WASHCO | HH | a) Hand pump complies with national/local norms with regard to siting (e.g. distance from nearest latrine, open water, or potential pollution source, uphill/gradient from latrine). *(verify*) | Yes/No |
| WT-CHP-T-S2b | WASHCO | HH | b) Hand pump has a sanitary surrounding that complies with national/local norms (e.g. including well seals, apron with a minimum diameter of 1 meter and without cracks, and fencing to prevent animal access. *(Verify)* | Yes/No |
| WT-CHP-T-S2c | WASHCO | HH | c) Drainage is controlled to minimize standing water and control disease vectors. (*Verify)* | Yes/No |
| WT-CHP-T-S2d | WASHCO | HH | d) The location of the borehole is not at risk of flooding. *(Verify)* | Yes/No |

| WT-CHP-T-S3 | Primary Investigation Method | Triangulation | The knowledge and spare parts are available to conduct maintenance and repairs in a timely manner | Answer |
|---|---|---|---|---|
| WT-CHP-T-S3a | KWT | WASHCO | a) Are there service provider staff available for basic repairs? | Yes/No |
| WT-CHP-T-S3b | KWT | WASHCO | b) Can spare parts be obtained? | Yes/No |
| WT-CHP-T-S3c | KWT | WASHCO | c) Are there national/local norms for repair times? | Yes/No |
| WT-CHP-T-S3d | KWT | WASHCO | d) Are repairs always achieved within the national/local norms for repair times? | Yes/No |

| WT-CHP-E-N1 | Primary Investigation Method | Triangulation | National environmental protection standards are established and applied to WASH services | Answer |
|---|---|---|---|---|
| WT-CHP-E-N1a | MoWME/MoH | Bowr/BoH/REPA | a) Do national standards exist to protect the natural environment in the design, sizing, and siting of water supply systems? | Yes/No |
| WT-CHP-E-N1b | MoWME/MoH | Bowr/BoH/REPA | b) Do national standards exist to mitigate the environmental impacts of constructing water supply infrastructure? | Yes/No |
| WT-CHP-E-N1c | MoWME/MoH | Bowr/BoH/REPA | c) Are the roles and responsibilities clear with regard to the monitoring and enforcement of environmental impact mitigation standards for water supply services? | Yes/No |
| WT-CHP-E-N1d | MoWME/MoH | Bowr/BoH/REPA | d) Are these standards available, widely disseminated, and enforced? | Yes/No |

| WT-CHP-E-N2 | Primary Investigation Method | Triangulation | National integrated water resources management plan is in place, updated regularly, and applied to WASH services planning | Answer |
|---|---|---|---|---|
| WT-CHP-E-N2a | MoWME/MoH | Bowr/BoH/REPA | a) Do district water supply plans comply with the national water resources management plans? | Yes/No |
| WT-CHP-E-N2b | MoWME/MoH | Bowr/BoH/REPA | b) Is monitoring data collected at the district level sent to the national level on at least an annual basis? | Yes/No |
| WT-CHP-E-N2c | MoWME/MoH | Bowr/BoH/REPA | c) Is the national water resources management plan updated based on revised water use and hydrologic data including climate change projections (with the frequency stipulated by national/local guidelines)? | Yes/No |
| WT-CHP-E-N2d | MoWME/MoH | Bowr/BoH/REPA | d) Is the national water resources management plan publicly available and are steps taken to educate district water offices and WASH service providers and water users about it? | Yes/No |

| WT-CHP-E-D1 | Primary Investigation Method | Triangulation | Local watershed management plan is in place, updated regularly, and applied to WASH services planning | Answer |
|---|---|---|---|---|
| WT-CHP-E-D1a | WWO/WHO/WWT | KWT | a) Do district water supply plans comply with local watershed management plans? | Yes/No |
| WT-CHP-E-D1b | WWO/WHO/WWT | KWT | b) Was the local watershed management plan developed with active participation of WASH actors (including government, private sector, and civil society)? | Yes/No |
| WT-CHP-E-D1c | WWO/WHO/WWT | KWT | c) Is the local watershed management plan updated based on revised water use and hydrologic data including climate change projections (with the frequency stipulated by national/local guidelines)? | Yes/No |
| WT-CHP-E-D1d | WWO/WHO/WWT | KWT | d) Is the local watershed management plan publicly available and are steps taken to educate water supply service providers and water users about it? | Yes/No |

| WT-CHP-E-D2 | Primary Investigation Method | Triangulation | Natural resources are managed to support sustainable WASH service delivery | Answer |
|---|---|---|---|---|
| WT-CHP-E-D2a | WWO/WHO/ WWT | KWT | a) Has the water supply service provider or district support entity identified and assessed ecosystem-related risks to drinking water quality (e.g., Water Safety Planning, etc.) and has vulnerability to climate-related impacts (including droughts and floods) been assessed for the domestic water supply service? | Yes/No |
| WT-CHP-E-D2b | WWO/WHO/ WWT | KWT | b) Have identified risks been addressed through management of source watersheds and/or aquifers? | Yes/No |
| WT-CHP-E-D2c | WWO/WHO/ WWT | KWT | c) Is the water demand controlled so that the sustainable yield of local water resources (e.g. groundwater, surface water, springs) is not compromised? (i.e., extraction is less than recharge) and are the competing water demands (e.g. domestic verses productive) being considered and is planning taking place to address potential areas of conflict? | Yes/No |
| WT-CHP-E-D2d | WWO/WHO/ WWT | KWT | d) Have climate-related adaptation measures been incorporated in the development of water supply services (including design, sizing, and siting of built infrastructure, management of water resources and the environment, etc.)? | Yes/No |

| WT-CHP-R-N1 | Primary Investigation Method | Triangulation | National policy and guidelines accounts for emergency and/or recovery WASH standards and protocols related to hand pumps in place | Answer |
|---|---|---|---|---|
| WT-CHP-R-N1a | MoWIE | BoWR | a) Is there a national government disaster management policy and/or guidelines detailing emergency/recovery WASH standards related to hand pumps that comes into force during times of disaster and effectively takes precedence over policies/standards applicable for non-disaster times? | Yes/No |
| WT-CHP-R-N1b | MoWIE | BoWR | b) Are there clear triggers/thresholds that are used to determine when such disaster policies are applicable and when they cease to be? | Yes/No |
| WT-CHP-R-N1c | BoWR/Regional/Zonal/Woreda | BoWR | c) Are lower tiers of government aware of the policy/guidelines for applying different WASH standards in an emergency/recovery? | Yes/No |

| WT-CHP-R-N2 | Primary Investigation Method | Triangulation | Disaster/emergency coordination group and/or management protocols in place and are executed | Answer |
|---|---|---|---|---|
| WT-CHP-R-N1a | MoWR | DRM-FSS/MoARD | a) Do MoWR and other line ministries have a pre-determined coordination system in place that is triggered by a declaration from the MoARD/DRMFSS? | Yes/no |
| WT-CHP-R-N1b | BoWR | DRM-FSS/MoARD | b) Are regional governments aware of the coordination group and enact them during emergencies/recovery actions? | Yes/no |

| WT-CHP-R-W1 | Primary Investigation Method | Triangulation | Additional resources/financing made available to local government during an emergency/recovery period | Answer |
|---|---|---|---|---|
| WT-CHP-R-W1a | Regional MoWIE | WWO | e-i) Were additional delegated level resources – budgets/personnel/training temporarily deployed during the recovery period? | Yes/No |
| WT-CHP-R-W1b | Regional MoWIE | WWO | e-ii) Were additional allocated resources pre disaster removed/ unavailable during the recovery period? | Yes/No |
| WT-CHP-R-W1c | Regional MoWIE | WWO | e-ii) If YES, How it was the impact of these changes during the disaster | Coding |

| WT-CHP-R-W2 | Primary Investigation Method | Triangulation | Community water points are designed and managed to mitigate against the additional stress on livelihoods resulting from meteorological hazards | Answer |
|---|---|---|---|---|
| WT-CHP-R-W2a | KWT | WASHCO | Was consideration given to the role of community-managed water points for livelihoods/MUS in the design and planning stages? | Yes/No |
| WT-CHP-R-W2b | KWT | WASHCO | Are community water points used to address livelihood needs in times of natural hazards (drought and/or flooding)? | Yes/No |

| WT-CHP-R-S1 | Primary Investigation Method | Triangulation | Citing and design of handpump facility accounts for likely/known natural hazards and incorporates risk mitigation measures | Answer |
|---|---|---|---|---|
| WT-CHP-R-S1a | WASHCO | HH | Was consideration given to the citing and design of the handpump to mitigate against likely/known hazards? | Yes/No |
| WT-CHP-R-S1b | WASHCO | HH | Is there evidence of damage caused by natural hazards to the handpump? | Coding |
| WT-CHP-R-S1c | WASHCO | HH | Is there an uneven distribution of water from the handpump which is creating conflict among different households/user groups? | Coding |

| WT-CHP-R-S2 | Primary Investigation Method | Triangulation | Fund established by community to cope with/repair water supply system following a disaster | Answer |
|---|---|---|---|---|
| WT-CHP-R-S2a | KWT | WASHCO | a) Are there guidelines to set aside additional tariff income for post-disaster periods? | Yes/No |
| WT-CHP-R-S2b | KWT | WASHCO | b) Do communities set aside funds for use for post-disaster requirements? | Coding |
| WT-CHP-R-S2c | KWT | WASHCO | Did the water tariff increased during post disaster period | Yes/No |
| WT-CHP-R-S2d | KWT | WASHCO | How much did the water tariff increase post disaster? | coding |

## B.2 COMMUNITY RETICULATED SYSTEMS

| WT-CRS-I-N1 | Primary Investigation Method | Triangulation | National policy, norms and guidelines for community-managed water supply and enabling legislation is in place | Answer |
|---|---|---|---|---|
| WT-CRS-I-N1a | MoWIE | BoWR | a) Does national policy for water supply recognize community management? | Yes/No |
| WT-CRS-I-N1b | MoWIE | BoWR | b) Have national norms and standards been set for the constitution and governance of community-based service providers (e.g. water committees in terms of functions)? | Yes/No |
| WT-CRS-I-N1c | MoWIE | BoWR | c) Is legislation in place that gives community management legal standing (e.g. by-laws formalizing water committees)? | Yes/No |
| WT-CRS-I-N1d | MoWIE | BoWR | d) Is there a national registry of the water systems/points that are managed by community-based organizations? | Yes/No |

| WT-CRS-I-D1 | Primary Investigation Method | Triangulation | Roles and responsibilities of district (service authority) and ownership arrangements are clearly defined | Answer |
|---|---|---|---|---|
| WT-CRS-I-D1a | WWO | KWT | a) Are there formalized roles and responsibilities for the service authority? | Yes/No |
| WT-CRS-I-D1b | WWO | KWT | b) Are the roles and responsibilities of the service authority written down and accessible? (*Verify)* | Yes/No |
| WT-CRS-I-D1c | WWO | KWT | c) Are the roles and responsibilities of the service authority understood by all in the service authority involved in overseeing the water system? | Yes/No |
| WT-CRS-I-D1d | WWO | KWT | d) Are the roles and responsibilities of the service authority understood by the service provider? | Yes/No |

| WT-CRS-I-S1 | Primary Investigation Method | Triangulation | There is a water committee which has been constituted in line with national norms and standards | Answer |
|---|---|---|---|---|
| WT-CRS-I-S1a | WASHCO | HH | a) Is there a water committee? | Yes/No |
| WT-CRS-I-S1b | WASHCO | HH | b) Are there national (or local) norms and standards for the composition of a water committee? IF YES-> Is the water committee constituted in line with the national (or local) norms and standards, in terms of number of members and the functions of each member? | Yes/No |
| WT-CRS-I-S1c | WASHCO | HH | c) Is the water committee constituted in line with the national norms and standards, in terms of gender? *In the absence of a standard, how many men?* _____ *How many women?* _____ | Yes/No |
| WT-CRS-I-S1d | WASHCO | HH | d) Has the water committee been democratically elected with involvement of the entire community? | Yes/No |

| WT-CRS-M-N1 | Primary Investigation Method | Triangulation | There is an updated national monitoring system or database available | Answer |
|---|---|---|---|---|
| WT-CRS-M-N1a | MoWIE | NWCO | a) Is there a national water system/water point database? | Yes/No |
| WT-CRS-M-N1b | MoWIE | NWCO | b) Does the collected monitoring data include information about the functionality of facilities and performance of service providers? | Yes/No |
| WT-CRS-M-N1c | MoWIE | NWCO | c) Is monitoring data collected at the district level sent to the national level on at least an annual basis? | Yes/No |
| WT-CRS-M-N1d | MoWIE | NWCO | d) Is the national water database used to influence national water planning and budgeting? | Yes/No |

| WT-CRS-M-N2 | Primary Investigation Method | Triangulation | National support to district/service authority is provided, including refresher training | Answer |
|---|---|---|---|---|
| WT-CRS-M-N2a | MoWIE | WWO | a) Is the district/service authority trained to support community water systems? | Yes/No |
| WT-CRS-M-N2b | MoWIE | WWO | b) Is routine refresher training provided to the district/service authority for their support to community water systems? | Yes/No |
| WT-CRS-M-N2c | MoWIE | WWO | c) Does this training occur at least once per year? | Yes/No |
| WT-CRS-M-N2d | MoWIE | WWO | d) Is there a system to monitor the effectiveness of the training? | Yes/No |

| WT-CRS-M-D1 | Primary Investigation Method | Triangulation | There is regular monitoring of water services and community management service provider and follow-up support | Answer |
|---|---|---|---|---|
| WT-CRS-M-D1a | WWO | KWT | a) Does the district/service authority monitor the financial, technical and administrative performance of the service provider? | Yes/No |
| WT-CRS-M-D1b | WWO | KWT | b) Does monitoring lead to direct support to the service provider when required? | Yes/No |
| WT-CRS-M-D1c | WWO | KWT | c) Does the district/service authority visit the community on monitoring visits at least 4 times per year? | Yes/No |
| WT-CRS-M-D1d | WWO | KWT | d) Does monitoring include periodic financial audits? | Yes/No |

| WT-CRS-M-S1 | Primary Investigation Method | Triangulation | Representative water committee actively manages water point with clearly defined roles and responsibilities | Answer |
|---|---|---|---|---|
| WT-CRS-M-S1a | WASHCO | HH | a) Are the management roles and responsibilities of the water committee clearly defined? ("*No" if there is no committee)* | Yes/No |
| WT-CRS-M-S1b | WASHCO | HH | b) Does the water committee carry out its technical responsibilities (e.g. ensuring system functionality)? | Yes/No |
| WT-CRS-M-S1c | WASHCO | HH | c) Does the water committee carry out its administrative duties? | Yes/No |
| WT-CRS-M-S1d | WASHCO | HH | d) Does the water committee carry out its financial management responsibilities? | Yes/No |

| WT-CRS-M-S2 | Primary Investigation Method | Triangulation | Water committee members actively participate in committee meetings and decision-making processes and reporting is transparent | Answer |
|---|---|---|---|---|
| WT-CRS-M-S2a | WASHCO | HH | a) Are water committee meetings conducted at the minimum frequency stipulated by local by-laws? [*or at least once every six months]* | Yes/No |
| WT-CRS-M-S2b | WASHCO | HH | b) Are technical records kept and shared with the community on a regular basis? *(verify)* | Yes/No |
| WT-CRS-M-S2c | WASHCO | HH | c) Are administrative records kept and shared with the community on a regular basis? *(verify)* | Yes/No |
| WT-CRS-M-S2d | WASHCO | HH | d) Are financial records kept and shared with the community on a regular basis? *(verify)* | Yes/No |

| WT-CRS-F-N1 | Primary Investigation Method | Triangulation | There are national/local mechanisms beyond community contributions and tariffs, to meet life-cycle costs, while ensuring affordability, equity, and non-discrimination | Answer |
|---|---|---|---|---|
| WT-CRS-F-N1a | MoFED | NWCO | a) Is there a line item for this in the national budget? | Yes/No |
| WT-CRS-F-N1b | MoFED | NWCO | b) Was the budget created considering total life-cycle costs including operation and minor maintenance costs, as well as making provision for capital maintenance (rehabilitation and replacement?) | Yes/No |
| WT-CRS-F-N1c | MoFED | NWCO | c) Are national/local mechanisms in place to fill the financing gap between collected revenues and life-cycle costs, where these occur? | Yes/No |
| WT-CRS-F-N1d | MoFED | NWCO | d) Are there national/local policies that ensure affordable access and equity/non-discrimination with regard to services? | Yes/No |

| WT-CRS-F-D1 | Primary Investigation Method | Triangulation | Resources available for district/service authority to fulfil functions | Answer |
|---|---|---|---|---|
| WT-CRS-F-D1a | RMoFED | WWO | a) Is there adequate staffing? | Yes/No |
| WT-CRS-F-D1b | RMoFED | WWO | b) Do the staff have adequate qualifications and skills? | Yes/No |
| WT-CRS-F-D1c | RMoFED | WWO | c) Is there sufficient budget allocated to the district water staff to provide the required support and service? | Yes/No |
| WT-CRS-F-D1d | RMoFED | WWO | d) Is the budget dispersed and used for this support / Or if support has not yet been needed is there a clear process for doing so? | Yes/No |

| WT-CRS-F-S1 | Primary Investigation Method | Triangulation | Tariff setting complies with national/local regulations, including social tariff | Answer |
|---|---|---|---|---|
| WT-CRS-F-S1a | WASHCO | HH | a) Has a water tariff been set? | Yes/No |
| WT-CRS-F-S1b | WASHCO | HH | b) Do national/local regulations prescribe that the tariff be based on projected costs, including operation and minor maintenance costs, as well as making provision for capital maintenance (rehabilitation and replacement?) | Yes/No |
| WT-CRS-F-S1c | WASHCO | HH | c) Has the tariff been set in line with national / local regulations? | Yes/No |
| WT-CRS-F-Sd | WASHCO | HH | d) Does the tariff make provision for the poorest within the community (e.g. through a social tariff)? | Yes/No |

| WT-CRS-F-S2 | Primary Investigation Method | Triangulation | Tariff collection is regular and sufficient | Answer |
|---|---|---|---|---|
| WT-CRS-F-S2a | WASHCO | HH | a) Is the tariff collected on a regular schedule (e.g. on pay-as-you -fetch basis, or monthly household levies, instead of collecting money when there is a breakdown)? | Yes/No |
| WT-CRS-F-S2b | WASHCO | HH | b) What is the annual revenue? (verify) What is the annual operating expenditure? (verify) Is the annual revenue greater than the annual expenditure? | Yes/No |
| WT-CRS-F-S2c | WASHCO | HH | c) Is there a national/local target for collection efficiency (i.e. percent who regularly pay) | Yes/No |
| WT-CRS-F-S2d | WASHCO | HH | d) Do most (at least 80%, *or a proportion in line with national or locally set standards*) households pay the tariff? (*i.e. Are they achieving the specified collection efficiency*) | Yes/No |

| WT-CRS-F-S3 | Primary Investigation Method | Triangulation | The water committee demonstrates effective financial management and accounting | Answer |
|---|---|---|---|---|
| WT-CRS-F-S3a | WASHCO | HH | a) Does the water committee keep financial records? (verify) | Yes/No |
| WT-CRS-F-S3b | WASHCO | HH | b) Does the committee have a bank account? (verify) | Yes/No |
| WT-CRS-F-S3c | WASHCO | HH | c) Does the committee share financial records with the community on a regular basis? | Yes/No |
| WT-CRS-F-S3d | WASHCO | HH | d) Are financial accounts audited? (verify) | Yes/No |

| WT-CRS-T-N1 | Primary Investigation Method | Triangulation | National/local norms exist that define acceptable service levels with explicit indicators and thresholds (e.g. water quality, quantity, accessibility, and affordability) | Answer |
|---|---|---|---|---|
| WT-CRS-T-N1a | MoWIE | NWCO | a) Are there national/local norms for water quality? | Yes/No |
| WT-CRS-T-N1b | MoWIE | NWCO | b) Are there national/local norms for quantity (e.g. volume per person per day) and reliability (e.g.-source supply provides water throughout the year, including during the dry season, or storage reservoir is sufficient for dry season)? | Yes/No |
| WT-CRS-T-N1c | MoWIE | NWCO | c) Are there national/local norms for accessibility (distance from household, crowding at water point) which also explicitly address issues of equity and non-discrimination against women, disabled, children, and elderly? | Yes/No |
| WT-CRS-T-N1d | MoWIE | NWCO | d) Are there national/local norms for affordability? | Yes/No |

| WT-CRS-T-N2 | Primary Investigation Method | Triangulation | There are national/local norms that define equipment standardization and arrangements for providing spare parts | Answer |
|---|---|---|---|---|
| WT-CRS-T-N2a | MoWIE | NWCO | a) Do national/local norms define equipment standardization and arrangements for providing spare parts? | Yes/No |
| WT-CRS-T-N2b | MoWIE | NWCO | b) Do national guidelines exist with regard to the construction of water points (borehole apron or platform, drainage, fencing, etc.)? | Yes/No |
| WT-CRS-T-N2c | MoWIE | NWCO | c) Are these guidelines available and widely disseminated? | Yes/No |
| WT-CRS-T-N2d | MoWIE | NWCO | d) Are the roles and responsibilities with regard to monitoring and enforcement clear? | Yes/No |

| WT-CRS-T-D1 | Primary Investigation Method | Triangulation | The district water staff are able to provide support for maintenance and repairs on request | Answer |
|---|---|---|---|---|
| WT-CHP-T-D1a | KWT | WASHCO | a) Are the district water staff able to provide technical support for maintenance on request? | No/Sometimes/Always |
| WT-CHP-T-D1b | KWT | WASHCO | b) Are the district water staff able to provide technical support for repairs on request? | No/Sometimes/Always |

| WT-CRS-T-S1 | Primary Investigation Method | Triangulation | Standpipes/household connections (depending on system) are functional and providing basic level of service according to national policy | Answer |
|---|---|---|---|---|
| WT-CRS-T-S1a | WASHCO | HH | a) Does the water provided meet the criteria on water quality? | Yes/No |
| WT-CRS-T-S1b | WASHCO | HH | b) Do the standpipes/household connections meet the criteria on quantity? | Yes/No |
| WT-CRS-T-S1c | WASHCO | HH | c) Do the standpipes/household connections meet the criteria in terms of accessibility (distance from household, crowding at water point) and is special consideration made to ensure equity and non-discrimination in accessibility for potentially marginalized populations (poor, elderly, women, children, disabled, etc.)? | Yes/No |
| WT-CRS-T-S1d | WASHCO | HH | d) Does the system meet the criteria on reliability (e.g. hours per day, days per week, months per year)? | Yes/No |
| | | | | |
| **WT-CRS-T-S2** | **Primary Investigation Method** | **Triangulation** | **Water system complies with standards and norms in terms of infrastructure, siting, and public health risk** | **Answer** |
| WT-CRS-T-S2a | WASHCO | HH | a) Water system source components comply with national or local standards and norms with regard to siting (e.g. boreholes adequate distance from contamination sources, spring boxes and system intakes adequately protected). *(verify*) | Yes/No |
| WT-CRS-T-S2b | WASHCO | HH | b) Sanitary condition of the system meets national/local standards (e.g. storage tank and pipes are not cracked or leaking). *(Verify)* | Yes/No |
| WT-CRS-T-S2c | WASHCO | HH | c) Drainage on tank overflow and around standpipes and household connections is controlled to minimize standing water and control disease vectors. | Yes/No |
| WT-CRS-T-S2d | WASHCO | HH | d) The location of the source (e.g. well, spring, or system intake) is not at risk of flooding. | Yes/No |
| | | | | |
| **WT-CRS-T-S3** | **Primary Investigation Method** | **Triangulation** | **The knowledge and spare parts are available to conduct maintenance and repairs in a timely manner** | **Answer** |
| WT-CRS-T-S3a | KWT | WASHCO | a) Are there service provider staff available for basic repairs? | Yes/No |
| WT-CRS-T-S3b | KWT | WASHCO | b) Can spare parts be obtained? | Yes/No |
| WT-CRS-T-S3c | KWT | WASHCO | c) Are there national/local norms for repair times? | Yes/No |
| WT-CRS-T-S3d | KWT | WASHCO | d) Are repairs always achieved within the national/local norms for repair times? | Yes/No |

| WT-CRS-E-N1 | Primary Investigation Method | Triangulation | National environmental protection standards are established and applied to WASH services | Answer |
|---|---|---|---|---|
| WT-CRS-E-N1a | MoWME/MoH | Bowr/BoH/REPA | a) Do national standards exist to protect the natural environment in the design, sizing, and siting of water supply systems? | Yes/No |
| WT-CRS-E-N1b | MoWME/MoH | Bowr/BoH/REPA | b) Do national standards exist to mitigate the environmental impacts of constructing water supply infrastructure? | Yes/No |
| WT-CRS-E-N1c | MoWME/MoH | Bowr/BoH/REPA | c) Are the roles and responsibilities clear with regard to the monitoring and enforcement of environmental impact mitigation standards for water supply services? | Yes/No |
| WT-CRS-E-N1d | MoWME/MoH | Bowr/BoH/REPA | d) Are these standards available, widely disseminated, and enforced? | Yes/No |

| WT-CRS-E-N2 | Primary Investigation Method | Triangulation | National integrated water resources management plan is in place, updated regularly, and applied to WASH services planning | Answer |
|---|---|---|---|---|
| WT-CRS-E-N2a | MoWME/MoH | Bowr/BoH/REPA | a) Do District water supply plans comply with the national water resources management plans? | Yes/No |
| WT-CRS-E-N2b | MoWME/MoH | Bowr/BoH/REPA | b) Is monitoring data collected at the district level sent to the national level on at least an annual basis? | Yes/No |
| WT-CRS-E-N2c | MoWME/MoH | Bowr/BoH/REPA | c) Is the national water resources management plan updated based on revised water use and hydrologic data including climate change projections (with the frequency stipulated by national/local guidelines)? | Yes/No |
| WT-CRS-E-N2d | MoWME/MoH | Bowr/BoH/REPA | d) Is the national water resources management plan publicly available and are steps taken to educate district water offices and WASH service providers and water users about it? | Yes/No |

| WT-CRS-E-D1 | Primary Investigation Method | Triangulation | Local watershed management plan is in place, updated regularly, and applied to WASH services planning | Answer |
|---|---|---|---|---|
| WT-CRS-E-D1a | WWO/WHO/WWT | KWT | a) Do district water supply plans comply with local watershed management plans? | Yes/No |
| WT-CRS-E-D1b | WWO/WHO/WWT | KWT | b) Was the local watershed management plan developed with active participation of WASH actors (including government, private sector, and civil society)? | Yes/No |
| WT-CRS-E-D1c | WWO/WHO/WWT | KWT | c) Is the local watershed management plan updated based on revised water use and hydrologic data including climate change projections (with the frequency stipulated by national/local guidelines)? | Yes/No |
| WT-CRS-E-D1d | WWO/WHO/WWT | KWT | d) Is the local watershed management plan publicly available and are steps taken to educate water supply service providers and water users about it? | Yes/No |

| WT-CRS-E-D2 | Primary Investigation Method | Triangulation | Natural resources are managed to support sustainable WASH service delivery | Answer |
|---|---|---|---|---|
| WT-CRS-E-D2a | WWO/WHO/ WWT | KWT | a) Has the water supply service provider or district support entity identified and assessed ecosystem-related risks to drinking water quality (e.g., Water Safety Planning, etc.) and has vulnerability to climate-related impacts (including droughts and floods) been assessed for the domestic water supply service? | Yes/No |
| WT-CRS-E-D2b | WWO/WHO/ WWT | KWT | b) Have identified risks been addressed through management of source watersheds and/or aquifers? | Yes/No |
| WT-CRS-E-D2c | WWO/WHO/ WWT | KWT | c) Is the water demand controlled so that the sustainable yield of local water resources (e.g. groundwater, surface water, springs) is not compromised? (i.e. extraction is less than recharge) and are the competing water demands (e.g. domestic verses productive) being considered and is planning taking place to address potential areas of conflict? | Yes/No |
| WT-CRS-E-D2d | WWO/WHO/ WWT | KWT | d) Have climate-related adaptation measures been incorporated in the development of water supply services (including design, sizing, and siting of built infrastructure, management of water resources and the environment, etc.)? | Yes/No |

| WT-CRS-R-N1 | Primary Investigation Method | Triangulation | National policy and guidelines accounts for emergency and/or recovery WASH standards and protocols related to community managed reticulated systems in place | Answer |
|---|---|---|---|---|
| WT-CRS-R-N1a | MoWIE | BoWR | a) Is there a national government disaster management policy and/or guidelines detailing emergency/recovery WASH standards related to CM reticulated systems that comes into force during times of disaster and effectively takes precedence over policies/standards applicable for non-disaster times? | Yes/No |
| WT-CRS-R-N1b | MoWIE | BoWR | b) Are there clear triggers/thresholds that are used to determine when such disaster policies are applicable and when they cease to be? | Yes/No |
| WT-CRS-R-N1c | BoWR/Regional/Zonal/Woreda | BoWR | c) Are lower tiers of government aware of the policy/guidelines for applying different WASH standards in an emergency/recovery? | Yes/No |

| WT-CRS-R-N2 | Primary Investigation Method | Triangulation | Disaster/emergency coordination group and/or management protocols in place and are executed | Answer |
|---|---|---|---|---|
| WT-CRS-R-N1a | MoWR | DRM-FSS/MoARD | a) Do MoWR and other line ministries have a pre-determined coordination system in place that is triggered by a declaration from the MoARD/DRMFSS? | Yes/no |
| WT-CRS-R-N1b | BoWR | DRM-FSS/MoARD | b) Are regional governments aware of the coordination group and enact them during emergencies/recovery actions? | Yes/no |

| WT-CRS-R-W1 | Primary Investigation Method | Triangulation | Additional resources/financing made available to local government during an emergency/recovery period | Answer |
|---|---|---|---|---|
| WT-CRS-R-W1a | Regional MoWIE | WWO | a) Were additional delegated level resources – budgets/personnel/training temporarily deployed during the recovery period? | Yes/No |
| WT-CRS-R-W1b | Regional MoWIE | WWO | b) Were additional allocated resources pre disaster removed/ unavailable during the recovery period? | Yes/No |
| WT-CRS-R-W1c | Regional MoWIE | WWO | b-ii) If YES, How it was the impact of these changes during the disaster | Coding |

| WT-CRS-R-W2 | Primary Investigation Method | Triangulation | Community water points are designed and managed to mitigate against the additional stress on livelihoods resulting from meteorological hazards | Answer |
|---|---|---|---|---|
| WT-CRS-R-W2a | KWT | WASHCO | Was consideration given to the role of community-managed water points for livelihoods/MUS in the design and planning stages? | Yes/No |
| WT-CRS-R-W2b | KWT | WASHCO | Are community water points used to address livelihood needs in times of natural hazards (drought and/or flooding)? | Yes/No |

| WT-CRS-R-S1 | Primary Investigation Method | Triangulation | Citing and design of reticulated system and major components accounts for likely/known natural hazards and incorporates risk mitigation measures | Answer |
|---|---|---|---|---|
| WT-CRS-R-W2a | WWO/ Woreda Agriculture and environment | MoWIE | a) Has the water supply service provider or woreda support entity identified and assessed vulnerability to climate-related impacts (including droughts and floods) for the domestic water supply service? | |
| WT-CRS-R-W2a-i | WWO/ Woreda Agriculture and environment | MoWIE | a-i) If Yes, Have identified risks been addressed through management of watersheds and/or aquifers? | Yes/No |
| WT-CRS-R-Sb | WASHCO | HH | b) Is there evidence of damage caused by natural hazards to the reticulated system/components? | Coding |
| WT-CRS-R-S1c | WASHCO | HH | c) Is there an uneven distribution of water from the reticulated system/components which is creating conflict among different households/user groups? | Coding |

| WT-CRS-R-S2 | Primary Investigation Method | Triangulation | Fund established by community to cope with/repair water supply system following a disaster | Answer |
|---|---|---|---|---|
| WT-CRS-R-S2a | KWT | WASHCO | a) Are there guidelines to set aside additional tariff income for post-disaster periods? | Yes/No |
| WT-CRS-R-S2b | KWT | WASHCO | b) Do communities set aside funds for use for post-disaster requirements? | Coding |
| WT-CRS-R-S2c | KWT | WASHCO | Did the water tariff increased during post disaster period | Yes/No |
| WT-CRS-R-S2d | KWT | WASHCO | How much did the water tariff increase post disaster? | coding |

## B.3 RAINWATER HARVESTING SYSTEMS

| WT-RWH-I-D1 | Primary Investigation Method | Triangulation | Roles and responsibilities of district (service authority) and ownership arrangements are clearly defined | Answer |
|---|---|---|---|---|
| WT-RWH-I-D1a | WEO | Institution | a) Are there formalized roles and responsibilities for the service authority? | Yes/No |
| WT-RWH-I-D1b | WEO | Institution | b) Are the roles and responsibilities of the service authority written down and accessible? (*Verify)* | Yes/No |
| WT-RWH-I-D1c | WEO | Institution | c) Are the roles and responsibilities of the service authority understood by all in the service authority involved in overseeing school/institutional rainwater harvesting systems? | Yes/No |
| WT-RWH-I-D1d | WEO | Institution | d) Are the roles and responsibilities of the service authority understood by the service provider? | Yes/No |

| WT-RWH-I-S1 | Primary Investigation Method | Triangulation | Roles and responsibilities of the service provider are clearly defined. | Answer |
|---|---|---|---|---|
| WT-RWH-I-S1a | Institution | | a) Is there a formally designated individual or group in-charge of the rainwater harvesting system (i.e. service provider)? | Yes/No |
| WT-RWH-I-S1b | Institution | | b) Are there formalized roles and responsibilities for the service provider? | Yes/No |
| WT-RWH-I-S1c | Institution | | c) Are the roles and responsibilities of the service provider written down and accessible? (Verify) | Yes/No |

| WT-RWH-M-N1 | Primary Investigation Method | Triangulation | National support to local government / other support institutions is provided and appropriate | Answer |
|---|---|---|---|---|
| WT-RWH-M-N1a | WEO/WWO | Institution | a) Is the local government trained to support school/ institutional rainwater harvesting system use and maintenance? | Yes/No |
| WT-RWH-M-N1b | WEO/WWO | Institution | b) Are financial and human resources provided to enable sufficient training to local government to support school/institutional rainwater harvesting system use and maintenance? | Yes/No |

| WT-RWH-M-D1 | Primary Investigation Method | Triangulation | Support to schools/institutions in upkeep of rainwater harvesting system is available as needed | Answer |
|---|---|---|---|---|
| WT-RWH-M-D1a | WEO/WWO | Institution | a) Is additional support available at the district level for the maintenance of school/institutional rainwater harvesting systems when requested? | |
| WT-RWH-M-D1b | WEO/WWO | Institution | b) Does the individual at the school/institution know who to contact (and has contact information) when support/assistance is needed with regard to the rainwater harvesting system? | Yes/No |
| WT-RWH-M-D1c | WEO/WWO | Institution | c) Is support provided promptly, *within 1 week*, once requested? | Yes/No |
| WT-RWH-M-D1d | WEO/WWO | Institution | d) Has support been solicited and received? | Yes/No |

| WT-RWH-M-S1 | Primary Investigation Method | Triangulation | Service provider actively manages rainwater harvesting system | Answer |
|---|---|---|---|---|
| WT-RWH-M-S1b | Institution | | a) Does the service provider carry out its technical responsibilities (e.g. Cleaning storage tank, gutters, rooftop, flush systems, etc)? | Yes/No |
| WT-RWH-M-S1c | Institution | | b) Does the service provider carry out its administrative duties? | Yes/No |
| WT-RWH-M-S1d | Institution | | c) Does the service provider carry out its financial management responsibilities? | Yes/No |

| WT-RWH-F-N1 | Primary Investigation Method | Triangulation | There are national/district mechanisms to meet full life-cycle costs, beyond the school/institution's budget | Answer |
|---|---|---|---|---|
| WT-RWH-F-N1a | WEO/WWO | Institution | a) Are there funds available to support school/institutional rainwater harvesting system costs beyond what schools can provide? | Yes/No |
| WT-RWH-F-N1b | WEO/WWO | Institution | b) Is there a clear process for soliciting and distributing these funds to schools/institutions? | Yes/No |
| WT-RWH-F-N1c | WEO/WWO | Institution | c) Are their records of these funds being distributed? | Yes/No |
| WT-RWH-F-N1d | WEO/WWO | Institution | d) Are resources provided to the district level to support school/institution? | Yes/No |

| WT-RWH-F-S1 | Primary Investigation Method | Triangulation | School/Institution has the ability to meet long-term operational, minor maintenance and capital maintenance expenditures | Answer |
|---|---|---|---|---|
| WT-RWH-F-S1a | Institution | | a) Does the school/institution have sufficient consumable supplies (e.g. tank cleaning supplies)? | Yes/No |
| WT-RWH-F-S1b | Institution | | b) Does the school/institution understand the long term operational and capital maintenance costs of their rainwater harvesting system? | Yes/No |
| WT-RWH-F-S1c | Institution | | c) Does the school/institution budget for long-term capital maintenance costs? | Yes/No |
| WT-RWH-F-S1d | Institution | | d) Are these funds kept separate, or specifically tracked? | Yes/No |

| WT-RWH-T-N1 | Primary Investigation Method | Triangulation | There are national/local norms that define acceptable service levels with explicit indicators and thresholds (e.g. water quality, quantity, crowding, accessibility) | Answer |
|---|---|---|---|---|
| WT-RWH-T-N1a | MoWIE | BoWR | a) Are there national/local norms for water quality? | Yes/No |
| WT-RWH-T-N1b | MoWIE | BoWR | b) Are there national/local norms for water quantity? | Yes/No |
| WT-RWH-T-N1c | MoWIE | BoWR | c) Are there national/local norms with regard to crowding at school/institution water supply facilities? (e.g. # of students per tap, # of taps per room, etc.)? | Yes/No |
| WT-RWH-T-N1d | MoWIE | BoWR | d) Are there national/local norms with regard to accessibility of water supply facilities at schools/institutions (e.g. Distance, ease of use, size considerations, etc.)? | Yes/No |

| WT-RWH-T-N2 | Primary Investigation Method | Triangulation | There are national/local norms that define equipment standardization and design criteria specific to rainwater harvesting? | Answer |
|---|---|---|---|---|
| WT-RWH-T-N2a | MoWIE | BoWR | a) Do national/local guidelines exist with regard to sizing rainwater harvesting systems? | Yes/No |
| WT-RWH-T-N2b | MoWIE | BoWR | b) Do national guidelines exist with regard to the construction of rainwater harvesting systems? | Yes/No |
| WT-RWH-T-N2c | MoWIE | BoWR | c) Are these guidelines available and widely disseminated? | Yes/No |
| WT-RWH-T-N2d | MoWIE | BoWR | d) Are the roles and responsibilities with regard to monitoring and enforcement clear? | Yes/No |

| WT-RWH-T-S1 | Primary Investigation Method | Triangulation | Rainwater harvesting system is functional and provides basic level of service according to national policy | Answer |
|---|---|---|---|---|
| WT-RWH-T-S1a | Institution | | a) Does the rainwater harvesting system meet the criteria for water quality? | Yes/No |
| WT-RWH-T-S1b | Institution | | b) Does the rainwater harvesting system meet the criteria for quantity? | Yes/No |
| WT-RWH-T-S1c | Institution | | c) Does the rainwater harvesting system meet the criteria in terms of crowding (i.e. # of students per tap)? | Yes/No |
| WT-RWH-T-S1d | Institution | | d) Is the rainwater harvesting system designed, constructed, and maintained so as to ensure ease of use by potentially marginalized populations (disabled, small children, etc.)? | Yes/No |
| | | | | |
| **WT-RWH-T-S2** | **Primary Investigation Method** | **Triangulation** | **Rainwater catchment surface complies with standards with regard to public health risk** | **Answer** |
| WT-RWH-T-S2a | Institution | | a) Catchment area (i.e. Roof) is free from visible signs of contamination (i.e. Plants, excreta, dust) (*Verify)* | Yes/No |
| WT-RWH-T-S2b | Institution | | b) There is no trees or vegetation overhang catchment area. (*Verify)* | Yes/No |
| WT-RWH-T-S2d | Institution | | d) Rainwater is collected in a closed container (with screen to control insects). (*verify)* | Yes/No |

| WT-RWH-T-S3 | Primary Investigation Method | Triangulation | Rainwater storage container and collection area comply with standards with regard to public health risk | Answer |
|---|---|---|---|---|
| WT-RWH-T-S3a | Institution | | a) Top or walls of storage container are free from cracks or damage. (*Verify)* | Yes/No |
| WT-RWH-T-S3b | Institution | | b) Storage container has tap in working order (no leaks or damage). (*Verify*) | Yes/No |
| WT-RWH-T-S3c | Institution | | c) Collection area has adequate drainage preventing erosion, minimizing standing water and disease vectors. (*Verify*) | Yes/No |
| WT-RWH-T-S3d | Institution | | d) Tank (including inside) and water collection area are free from other sources of pollution. (*Verify)* | Yes/No |

| WT-CRS-R-N1 | Primary Investigation Method | Triangulation | National policy and guidelines accounts for emergency and/or recovery WASH standards and protocols related to institutional rainwater harvesting systems are in place | Answer |
|---|---|---|---|---|
| WT-CRS-R-N1a | MoWIE | BoWR | a) Is there a national government disaster management policy and/or guidelines detailing emergency/recovery WASH standards related to rainwater harvesting systems that comes into force during times of disaster and effectively takes precedence over policies/standards applicable for non-disaster times? | Yes/No |
| WT-CRS-R-N1b | MoWIE | BoWR | b) Are there clear triggers/thresholds that are used to determine when such disaster policies are applicable and when they cease to be? | Yes/No |
| WT-CRS-R-N1c | BoWR/Regional/Zonal/Woreda | BoWR | c) Are lower tiers of government aware of the policy/guidelines for applying different WASH standards in an emergency/recovery? | Yes/No |

| WT-CRS-R-N2 | Primary Investigation Method | Triangulation | Disaster/emergency coordination group and/or management protocols in place and are executed | Answer |
|---|---|---|---|---|
| WT-CRS-R-N1a | MoWR | DRMFSS/MoARD | a) Do MoWR and other line ministries have a pre-determined coordination system in place that is triggered by a declaration from the MoARD/DRMFSS? | Yes/No |
| WT-CRS-R-N1b | BoWR | DRMFSS/MoARD | b) Are regional governments aware of the coordination group and enact them during emergencies/recovery actions? | Yes/No |

| WT-CRS-R-W1 | Primary Investigation Method | Triangulation | Additional resources/financing made available to local government during an emergency/recovery period | Answer |
|---|---|---|---|---|
| WT-CRS-R-W1a | Institution | WEO | a) Were additional delegated level resources – budgets/personnel/training temporarily deployed during the recovery period? | Yes/No |
| WT-CRS-R-W1b | Institution | WEO | b) Were additional allocated resources pre disaster removed/ unavailable during the recovery period? | Yes/No |
| WT-CRS-R-W1c | Institution | WEO | b-ii) If YES, How it was the impact of these changes during the disaster | Yes/No |

| WT-CRS-R-S1 | Primary Investigation Method | Triangulation | Siting and design of rainwater harvesting system and major components accounts for likely/known natural hazards and incorporates risk mitigation measures | Answer |
|---|---|---|---|---|
| WT-CRS-R-W2a | WWO/ Woreda Agriculture and environment | Institution | a) Has the institution or woreda support entity identified and assessed vulnerability to climate-related impacts (including droughts and floods) for the RWH system? | Yes/No |
| WT-CRS-R-W2a-i | WWO/ Woreda Agriculture and environment | Institution | a-i) If Yes, Have identified risks been addressed through management plan for access to any stored water including rationed access in periods of scarcity? | Yes/No |
| WT-CRS-R-Sb | WASHCO | Institution | b) Is there evidence of damage caused by natural hazards to the superstructure on which the RWH is based? | Yes/No |
| WT-CRS-R-S1c | WASHCO | Institution | c) Is there an uneven distribution of water from the RWH system which is creating conflict among different user groups? | Yes/No |

| WT-CRS-R-S2 | Primary Investigation Method | Triangulation | Fund established by community to cope with/repair water supply system following a disaster | Answer |
|---|---|---|---|---|
| WT-CRS-R-S2b | KWT | Institution | a) Does the institution set aside funds for use for post-disaster requirements? | Yes/No |
| WT-CRS-R-S2c | KWT | Institution | a-i) Did contributions to this fund increase post disaster? | Yes/No |
| WT-CRS-R-S2d | KWT | Institution | a-ii) By how much? | Yes/No |

## B.4 HYGIENE AND HAND WASHING PROMOTION

| HY-HWP-I-N1 | Primary Investigation Method | Triangulation | Hygiene promotion, including handwashing, is a recognized government policy | Answer |
|---|---|---|---|---|
| HY-HWP-I-N1a | MoH | NWCO | a) Is hygiene promotion a recognized government policy? | Yes/No |
| HY-HWP-I-N1b | MoH | NWCO | b) Is the hygiene promotion policy is overseen by a specified ministry? | Yes/No |
| HY-HWP-I-N1c | MoH | NWCO | c) Is handwashing part of the government's hygiene policy? | Yes/No |
| HY-HWP-I-N1d | MoH | NWCO | d) Is there a national ministry reviewing, analysing and interpreting surveillance data in order to evaluate hygiene education activities and determine priority areas for future action? | Yes/No |
| | | | | |
| **HY-HWP-I-N2** | **Primary Investigation Method** | **Triangulation** | **There is a hygiene promotion/behavior change program with clear designation of responsibilities in national ministry (ies)** | **Answer** |
| HY-HWP-I-N2a | MoH | NWCO | a) Is there a national hygiene promotion/behavior change program? | Yes/No |
| HY-HWP-I-N2b | MoH | NWCO | b) Does the national hygiene promotion/behavior change program clearly designate responsibilities in national ministries? | Yes/No |
| HY-HWP-I-N2c | MoH | NWCO | c) Does the national hygiene promotion/behavior change program undertake hygiene education through the mass media to support activities at the community level? | Yes/No |
| HY-HWP-I-N2d | MoH | NWCO | d) Does the hygiene promotion/behavior change program provide regional training in hygiene education for surveillance field staff and support agencies? | Yes/No |

| HY-HWP-I-D1 | Primary Investigation Method | Triangulation | Coordination and support for hygiene promotion is provided by district authority and other agencies (Ministry of Health) | Answer |
|---|---|---|---|---|
| HY-HWP-I-D1a | WHO | KHW | a) Is the district authority involved with hygiene promotion? | Yes/No |
| HY-HWP-I-D2b | WHO | KHW | b) Does the district authority liaise with relevant ministries, such as ministry of health regarding hygiene promotion? ) | Yes/No |
| HY-HWP-I-D3c | WHO | KHW | c) Do the district authority and relevant ministry provide resources (e.g. personnel, educational materials, etc.) for hygiene promotion in the community? | Yes/No |
| HY-HWP-I-D4d | WHO | KHW | d) Does the district authority work with field staff from different agencies active in the local communities, and coordinate hygiene education, training, support, and educational materials. | Yes/No |

| HY-HWP-M-D1 | Primary Investigation Method | Triangulation | Monitoring and follow-up support is provided to community hygiene promoter/facilitator, including refresher training | Answer |
|---|---|---|---|---|
| HY-HWP-M-D1a | WHO | KHW | a) Is there a designated entity that supports and manages the hygiene promoters/community facilitators? | Yes/No |
| HY-HWP-M-D1b | WHO | KHW | b) Is support available to hygiene promoters/facilitators when requested? | Yes/No |
| HY-HWP-M-D1c | WHO | KHW | c) Are hygiene promoters/facilitators monitored and is support provided following monitoring? | Yes/No |
| HY-HWP-M-D1d | WHO | KHW | d) Is refresher training provided annually to hygiene promoters/facilitators? | Yes/No |

| HY-HWP-M-S1 | Primary Investigation Method | Triangulation | Community facilitator or promoter has capacity to monitor and provide follow-up support to households, including refresher training | Answer |
|---|---|---|---|---|
| HY-HWP-M-S1a | WHO | KHW | a) Are there community facilitators or hygiene promoters? | Yes/No |
| HY-HWP-M-S1b | WHO | KHW | b) Do the community facilitators/promoters monitor hygiene practices of households? | Yes/No |
| HY-HWP-M-S1c | WHO | KHW | c) Do the community facilitators/promoters provide support, including refresher training, to households following monitoring of hygiene practices, as needed? | Yes/No |
| HY-HWP-M-S1d | WHO | KHW | d) Do the community facilitators/promoters consider gender-specific messages relating to hygiene promotion and behavior change and do programs acknowledge the key role that women play in impacting family hygiene behavior? | Yes/No |

| HY-HWP-F-N1 | Primary Investigation Method | Triangulation | National/local mechanisms are in place to meet full cost of hygiene and hand washing promotion | Answer |
|---|---|---|---|---|
| HY-HWP-F-N1a | WHO | KHW | a) Is there a local budget for implementing hygiene promotion program (e.g. facilitator training?) | Yes/No |
| HY-HWP-F-N1b | MoH | KHW | b) Are there supplementary national funds available for hygiene and handwashing promotion do these funds cover hygiene behavior change communication programs? | Yes/No |
| HY-HWP-F-N1c | WHO | KHW | c) Is there a social program at the national or local level to provide low-income households with hygiene products? | Yes/No |
| HY-HWP-F-N1d | WHO | KHW | d) Do district authorities have sufficient resources (e.g. personnel, educational materials, etc.)? | Yes/No |

| HY-HWP-F-D1 | Primary Investigation Method | Triangulation | Soap and other hygiene products are available in the local market and affordable | Answer |
|---|---|---|---|---|
| HY-HWP-F-D1a | HH | KHW | a) Is soap locally available and affordable? | Yes/No |
| HY-HWP-F-D1b | HH | KHW | b) Are anal cleansing materials locally available and affordable? | Yes/No |
| HY-HWP-F-D1c | HH | KHW | c) Are menstrual hygiene products locally available and affordable? | Yes/No |
| HY-HWP-F-D1d | HH | KHW | d) Are other hygiene products locally available and affordable? | Yes/No |

| HY-HWP-F-S1 | Primary Investigation Method | Triangulation | Households are willing and able to pay for hygiene products | Answer |
|---|---|---|---|---|
| HY-HWP-F-S1a | HH | KHW | a) Do households say that they are willing and able to pay for hygiene products, including soap? | Yes/No |
| HY-HWP-F-S1b | HH | KHW | b) Do households currently have soap or other cleansing agent available (e.g. ash)? (verify) | Yes/No |

| HY-HWP-T-S1 | Primary Investigation Method | Triangulation | Households have knowledge of handwashing and the correct use of facilities | Answer |
|---|---|---|---|---|
| HY-HWP-T-S1a | HH | | a) Do household members know how to wash hands (with soap and water or other cleaning agent)? | Yes/No |
| HY-HWP-T-S1b | HH | | b) Do household members know when the important times for handwashing are? | Yes/No |
| HY-HWP-T-S1c | HH | | c) Do household members know and practice safe water storage? | Yes/No |
| HY-HWP-T-S1d | HH | | d) Is the female (or male if no female) head of household actively engaged in promoting handwashing and hygiene practices amongst household members? | Yes/No |
| | | | | |
| **HY-HWP-T-S2** | **Primary Investigation Method** | **Triangulation** | **Environmental health risk guidelines exist and are followed** | **Answer** |
| HY-HWP-T-S2a | KHW | HH | a) Do the hygiene and sanitation facilities comply with national/local siting regulation with regard to distance from water sources and in an area where there is little or no risk of flooding? | Yes/No |
| HY-HWP-T-S2b | KHW | HH | b) Does the sanitary condition of the facilities meet national/local standards (e.g. condition of floor material, presence of fecal matter, flies, containment of used anal cleansing material, etc.)? (Verify) | Yes/No |
| HY-HWP-T-S2c | KHW | HH | c) Are septic tank, drain field, soak pits, latrine chamber registers acceptably sealed and access limited? (verify) | Yes/No |
| HY-HWP-T-S2d | KHW | HH | d) Is drainage from handwashing stations adequate to prevent standing water? (verify) | Yes/No |
| | | | | |
| **HY-HWP-T-S3** | **Primary Investigation Method** | **Triangulation** | **Handwashing facilities are maintained with soap and water or ash** | **Answer** |
| HY-HWP-T-S3a | KHW | HH | a) Are there handwashing facilities accessible after toilet use and before food preparation? | Yes/No |
| HY-HWP-T-S3b | KHW | HH | b) Do the handwashing facilities include soap or another cleansing agent? (verify) | Yes/No |
| HY-HWP-T-S3c | KHW | HH | c) Are the handwashing facilities hygienic and in working order (i.e. water facet works)? (verify) | Yes/No |
| HY-HWP-T-S3d | KHW | HH | d) Is there budget available for replenishing soap or other cleansing agent? | Yes/No |
| | | | | |

| HY-HWP-E-N1 | Primary Investigation Method | Triangulation | National environmental protection standards are established and applied to WASH services | Answer |
|---|---|---|---|---|
| HY-HWP-E-N1a | MoWIE/MoEFD | | a) Do national standards exist to protect the natural environment in the design, sizing, siting, and construction of handwashing facilities? | Yes/No |
| HY-HWP-E-N1b | MoWIE/MoEFD | | b) Do national standards exist requiring proper disposal and management of greywater from handwashing facilities? | Yes/No |
| HY-HWP-E-N1c | MoWIE/MoEFD | | c) Are the roles and responsibilities clear with regard to the monitoring and enforcement of environmental impact mitigation standards for household greywater and wastewater? | Yes/No |
| HY-HWP-E-N1d | MoWIE/MoEFD | | d) Are these standards available, widely disseminated, and enforced? | Yes/No |
| | | | | |
| **HY-HWP-E-D1** | **Primary Investigation Method** | **Triangulation** | **Natural resources are managed to support sustainable WASH service delivery** | **Answer** |
| HY-HWP-E-D1a | WHO | | a) Has vulnerability to climate-related impacts (including droughts and floods) been assessed for handwashing facilities? | Yes/No |
| HY-HWP-E-D1b | WHO | | b) Have climate-related adaptation measures been incorporated in the planning of handwashing facilities (including design, sizing, and siting of built infrastructure)? | Yes/No |

| HY-HWP-R-N1 | Primary Investigation Method | Triangulation | National policy and guidelines accounts for emergency and/or recovery WASH standards and protocols related to hygiene promotion/handwashing in place | Answer |
|---|---|---|---|---|
| HY-HWP-R-N1a | MoWIE | BoWR | a) Is there a national government disaster management policy and/or guidelines detailing emergency/recovery WASH standards related to hygiene promotion and handwashing that comes into force during times of disaster and effectively takes precedence over policies/standards applicable for non-disaster times? | Yes/No |
| HY-HWP-R-N1b | MoWIE | BoWR | b) Are there clear triggers/thresholds that are used to determine when such disaster policies are applicable and when they cease to be? | Yes/No |
| HY-HWP-R-N1c | BoWR/Regional/Zonal/Woreda | BoWR | c) Are lower tiers of government aware of the policy/guidelines for applying different WASH standards for hygiene promotion/handwashing in an emergency/recovery? | Yes/No |
| | | | | |
| **HY-HWP-R-W1** | **Primary Investigation Method** | **Triangulation** | **Were public health campaigns made to support hygiene promotion/handwashing during an emergency/recovery period** | **Answer** |
| HY-HWP-R-W1a | Regional MoWIE | WWO | a Was there any type of public health campaign carried out in the Woreda during or after the emergency to support hygiene promotion? | Yes/No |
| HY-HWP-R-W1b | Regional MoWIE | WWO | b-i) If YES, how were these campaigns carried out? | Coding |
| HY-HWP-R-W1b | Regional MoWIE | WWO | b-ii) If YES, were these repeated? | Coding |

| HY-HWP-R-S1 | Primary Investigation Method | Triangulation | Were additional hygiene risks identified and mitigated at community/household level during an emergency/recovery period? | Answer |
|---|---|---|---|---|
| HY-HWP-R-S1a | HEW/KWT | HH | a) Are additional vector control measures taken to minimise risks from increased hazards related to the emergency? | Yes/No |
| HY-HWP-R-S1b | HEW/KWT | HH | b-i) If YES, which additional measures have been taken? | Coding |
| HY-HWP-R-S1c | HEW/KWT | HH | c) Has provision been made to increase the volume of water made available for adequate handwashing (i.e. through temporary supplies)? | Yes/No |

| HY-HWP-R-S2 | Primary Investigation Method | Triangulation | Did soap and other hygiene products remain available in the local market and affordable during an emergency/recovery period? | Answer |
|---|---|---|---|---|
| HY-HWP-R-S2a | HH | SP | a) is there any trends of hygiene items market prices increase post disaster? | Yes/No |
| HY-HWP-R-S2b | HH | SP | a-i) If YES, How much did market prices for hygiene items increase post disaster? | Coding |
| HY-HWP-R-S2c | HH | SP | b) Did household purchasing capacity for hygiene products diminish post disaster due to loss of assets/livelihood etc.? | Coding |

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